

college

A N D U N I V E R S I T Y

business

DECEMBER 1957

Tax Credit Plan for Parents

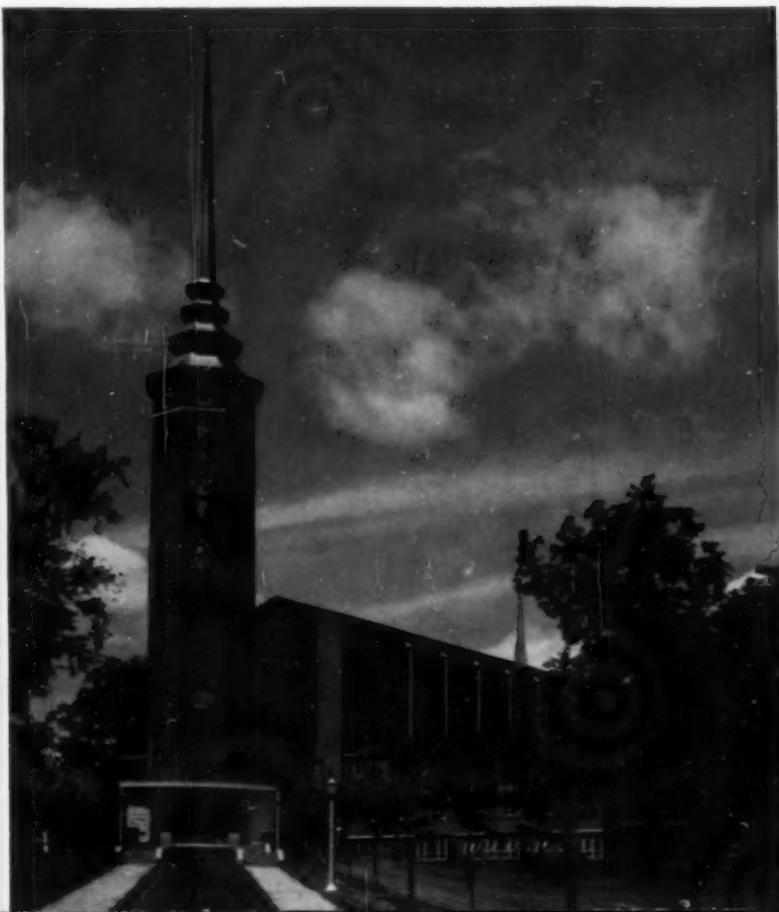
Maintaining High Faculty Morale

How to Combine Chapel and Library Facilities

Business Officer and Fund Raising

The Successful Controller

CHAPEL-LIBRARY, WITTENBERG COLLEGE, SPRINGFIELD, OHIO (page 28)





...on trim, functional...

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*FIBERESIN — a laminated board having a melamine resin plastic surface on an extremely dense core of wood fibre and phenolic resin. This combination of materials is welded together in hydraulic hot plate presses at accurately controlled high temperatures and pressures. The decorative wood grain patterns and colors are an integral part of the surface.

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by SIMMONS

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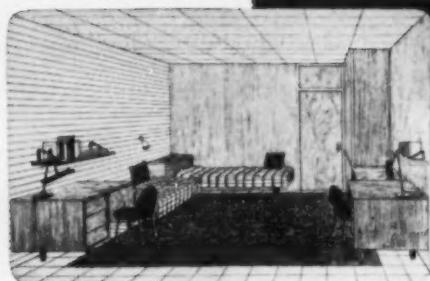
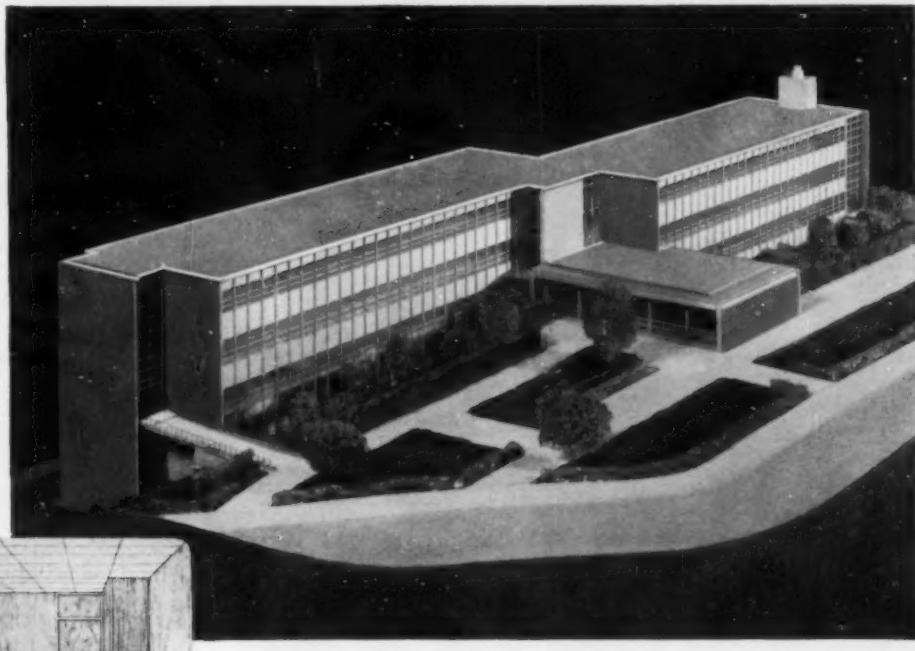
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Donner Hall, new men's dormitory, CARNEGIE INSTITUTE OF TECHNOLOGY, Pittsburgh, Pennsylvania, has the distinction of having been designed by two 1932 graduates of Carnegie's College of Fine Arts, and erected by a former Carnegie student, the General Contractor.

MEN'S DORMITORY HAS "NEW LOOK"

• In the minds of many college administrators and students 1954 will be long remembered as the year during which much-needed dormitories began to bloom on scores of campuses throughout the land. High on the list of notable sleep-and-study buildings made ready for Fall occupancy is Carnegie Tech's new million dollar men's dormitory, Donner Hall, providing modern, quiet living facilities for 243 students. Contemporary in design, equipment and furnishings, Donner Hall is a

two-wing structure with major exterior areas of aluminum and glass. The wings are joined on the ground floor by two spacious lounges available for dances, social events and other functions. Also on this floor is a student counselor's suite. Above, each room floor has its own smaller lounge. **SLOAN Flush VALVES**, famous for efficiency, durability and economy, were selected for installation throughout Donner Hall—more evidence of performance that explains why . . .



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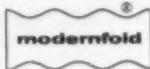
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college AND UNIVERSITY business

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AMONG THE AUTHORS: Thomas J. Cunningham, general counsel of the University of California, outlines principles he considers should be studied in developing a tax credit plan for parents who are assisting their children in financing the costs of a college education. Admitted to the California bar in 1931, he has served as a judge in the superior court of Los Angeles. During World War II he was an infantry colonel. He has several magazine articles on legal subjects to his credit. . . . Louis H. Fitch, business manager of Wittenberg College, Springfield, Ohio, describes how that institution has been able successfully to combine library and chapel facilities in the same structure. Mr. Fitch was formerly business manager of Baldwin-Wallace College, Berea, Ohio. During World War II he was an agent for the Federal Bureau of Investigation. . . . Gus Turbeville, president of Northland College, Ashland, Wis., suggests factors to be considered in maintaining a high standard of faculty morale. Elected president of Northland College in 1953 at the age of 30, at that time he was said to be the nation's youngest college president. He has written extensively for magazines.

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QUESTIONS AND ANSWERS

Improving Higher Education

Question: What experience in the management of other organizations—business, government, military and voluntary health and welfare agencies—is most relevant to improvement of higher education?—R.B., S.C.

ANSWER: Experience in the management of any organization—business, government, military and the like—may be relevant to improvement of higher education provided that due recognition is given to inherent differences among organizations and differences in aims and objectives. Colleges and universities are exceedingly complex organizations and actually consist of a series of businesses and activities requiring a vast array of skills. The major functions of a university are instruction, research and public service. However, a large number of supporting services are required to carry out the major functions. Colleges and universities must operate a physical plant, plan for new construction, provide and operate dining halls and residence halls, operate shops, laundries, printing plants, infirmaries or hospitals. They also must establish and maintain systems of transportation and communication. The institution must be alert to the needs and demands of staff, students, parents, alumni, governmental agencies, industry and the public.

The ability to operate efficiently and economically, so necessary in business, also is essential in higher education. In business the profit and loss statement provides periodically an indication of the effectiveness of operations and management. Such a statement cannot be accurately prepared for a not-for-profit organization such as a college or university, but every attempt must be made to ensure efficiency.

The need in government to account accurately and to give evidence of integrity in the administration of public funds also is necessary in an institution of higher education. Whether the funds are truly "public" or whether they are administered as a trust, both publicly and privately controlled colleges and universities must operate with integrity. The public has a right to know that funds are used for the purpose intended.

The logistics of a military operation

might be useful in certain aspects of university management, such as transportation, communication, food service, and housing. However, there is little comparability between the chain of command that exists in the military and that which prevails in a college or university. Even so, staff members who were formerly in military service have in many instances become successful educational administrators.

Managerial experience in health and welfare agencies also may be useful, since it involves the ability to work with large groups of individuals of varying background and environment. It involves the need to develop a sympathetic understanding of the problems of many people. It also requires integrity in the use of funds and the need to operate on a not-for-profit basis.—RAYMOND W. KETTLER, controller, *Regents of the University of California*.

Prospects of Fund Raising

Question: Are there valid grounds for optimism about the prospects of fund raising for higher education?—F.I., Ind.

ANSWER: I think there are. In the first place, we have just seen the beginnings of corporate giving to higher education. Two things are happening in that area: (1) more and more business firms are giving to universities, and (2) those who have been giving are giving more.

We also have seen a greater regard on the part of alumni for the financial problems of their universities. Every sign points to increased support from alumni.

Moreover, such agencies as the Council for Financial Aid to Education have spotlighted the financial needs of our institutions of higher learning. There is a greater awareness on the part of the American people generally on the significance of higher education in a democratic society.

Much of the success of universities in raising funds will depend on the quality of the programs they offer and their ability to explain these programs clearly to prospective donors. I have great confidence in the ability of college and university personnel on both these scores.—GEORGE BAUGHMAN, vice president, *New York University*.



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To find S_n
 $S_n = \frac{1}{2} \left[2a_1 + \left(n-1\right)d \right]$

Geometrical Progressions.
To find a_n
 $a_n = a_1 \cdot r^{n-1}$

To find S_n
 $S_n = a_1 \cdot \frac{1-r^n}{1-r}$



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Simmons Dorm Line furniture has pleasing, modern appearance . . . permits individualized room treatments. Welded steel construction, tough upholstery, wear-resisting Fibresin tops assure low maintenance and easy cleaning.

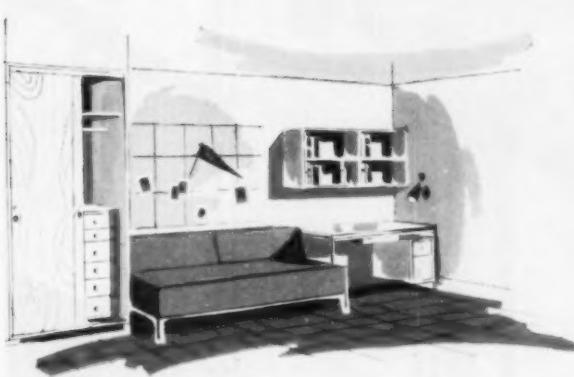
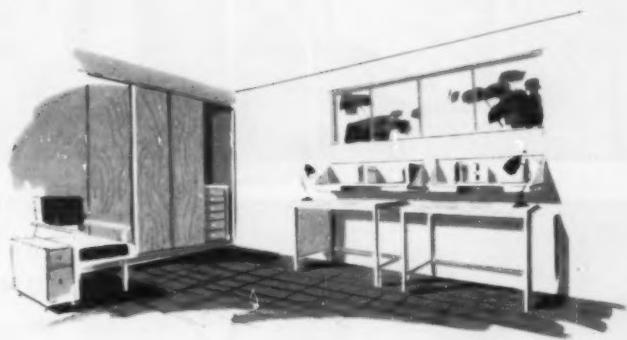


Illustration shows Simmons Dorm Line built-in storage unit with a six-drawer chest set inside; Beautyrest® Sleep Lounge; Simmons desk with two drawers and pencil drawer, with bookshelf above. Just one of the many room arrangements possible with Dorm Line furniture. There's a wide range of color combinations to choose from.

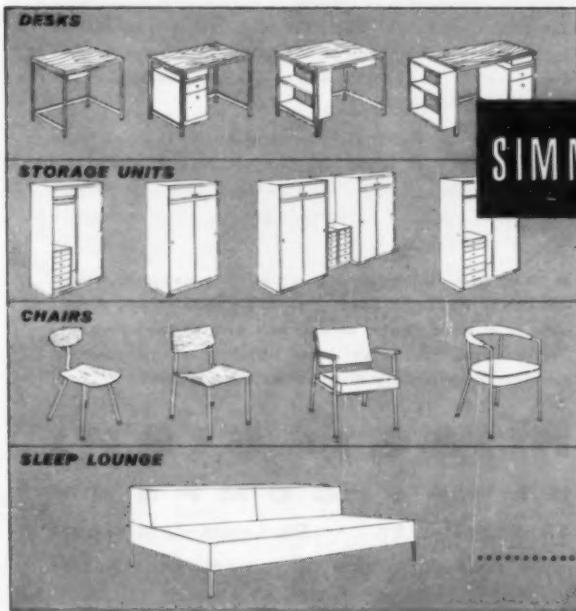
Versatile Dorm Line Furniture banishes the "institutional look"

In this room two Simmons Dorm Line wardrobes, each with a six-drawer chest, provide ample storage space for two students. The two student desks have end bookshelves, and also bookshelves above the writing space.

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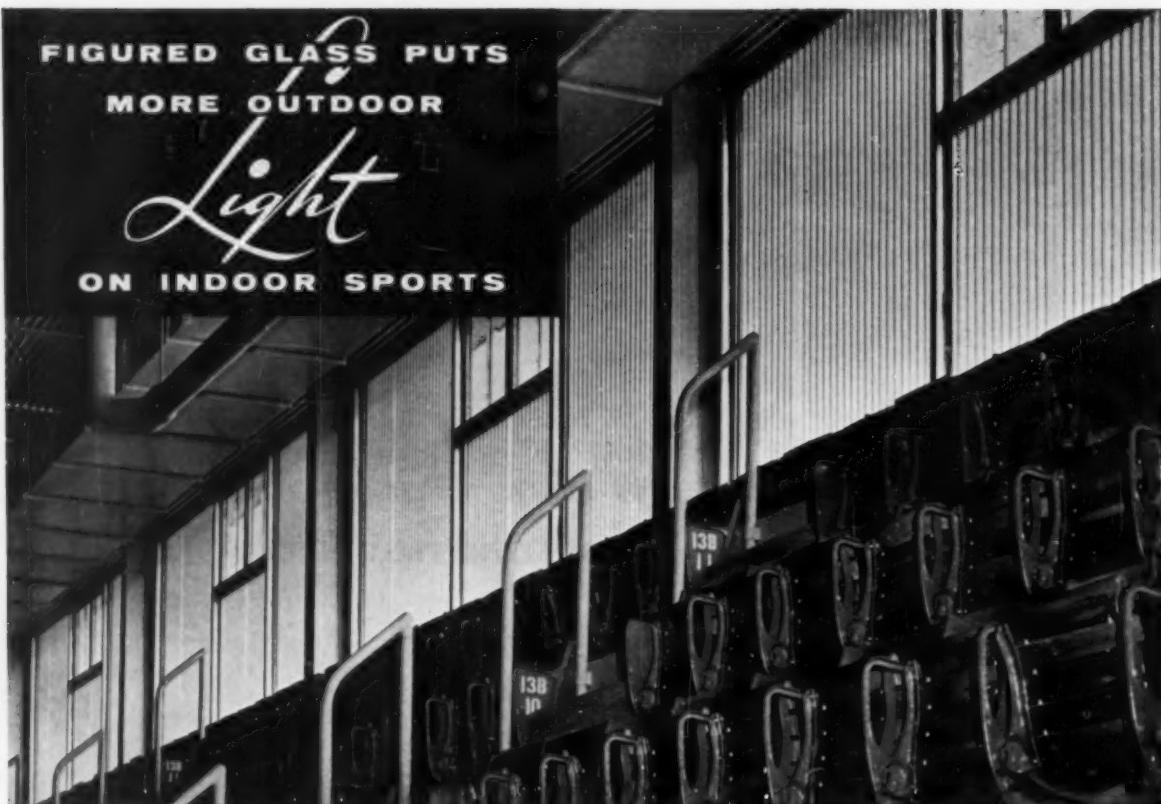
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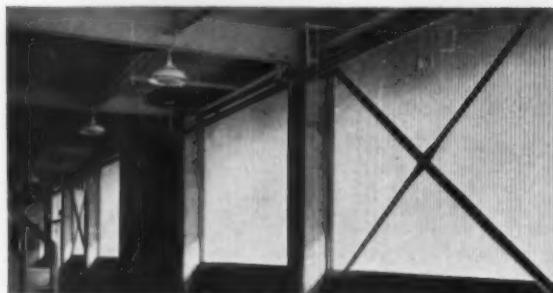
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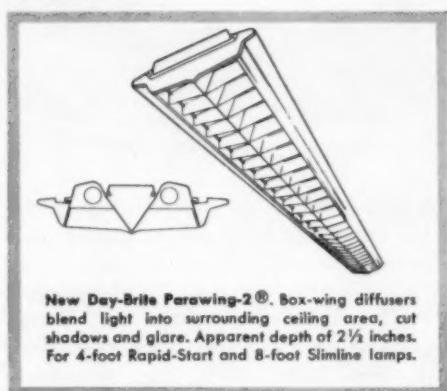
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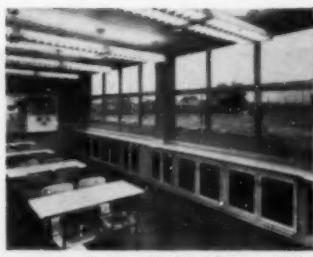
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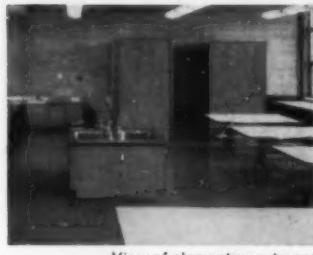
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Ceramics teaching area.



Storage facilities for art pupils.

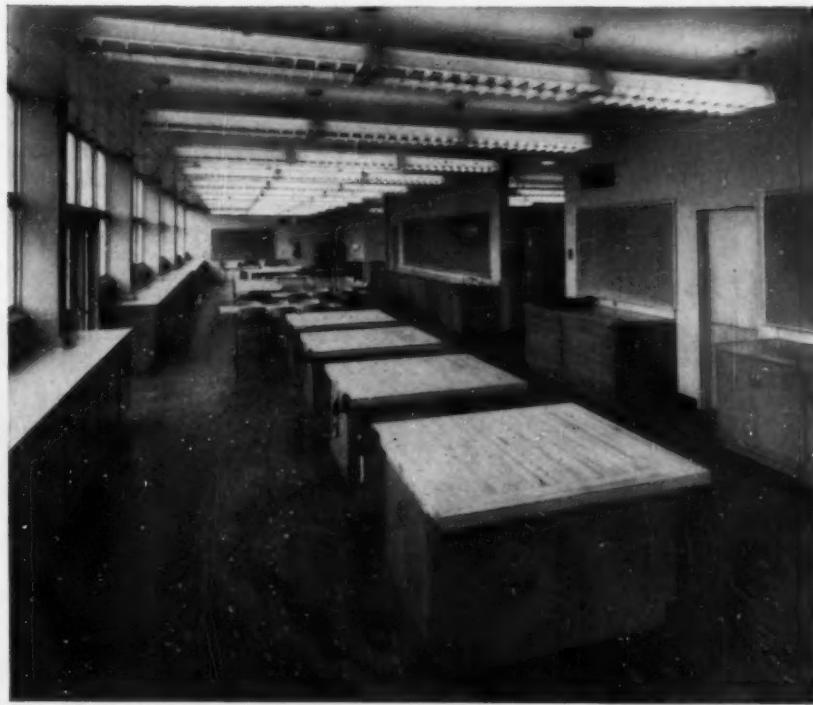


View of elementary arts and crafts room.



Opposite view of arts and crafts room for elementary students.

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General view of crafts areas.

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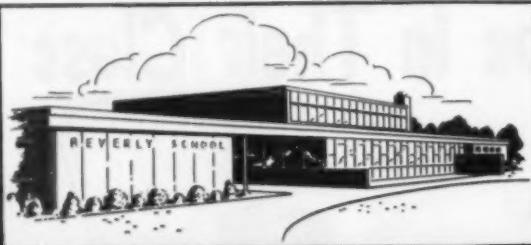
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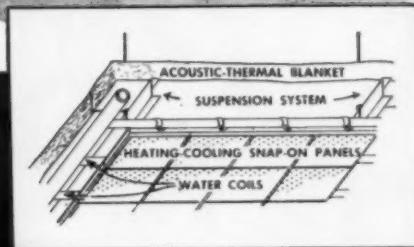
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COLLEGE and UNIVERSITY BUSINESS

The Best Way to Apply for Foundation Support

JAMES W. ARMSEY
Assistant to the President, The Ford Foundation



TO STATE THAT FINANCES CONSTITUTE THE MOST serious problem in higher education today is almost to labor a truism. There are other problems, of course, but the weight of the financial problem bears so heavily upon all others that it has become a primary preoccupation of those engaged in the business of education. How often has it been said that "there's nothing wrong with this institution that a little [usually meaning a lot of] money wouldn't take care of"? And even if this statement is not wholly true in all cases, it is at least partly true in most.

Among the sources of financial support for colleges and universities is the philanthropic foundation. Educational institutions and educational foundations are motivated by sets of objectives that often coincide. When they do, the relationship becomes one in which the former seek to obtain some of the funds at the disposal of the latter. How does this process of the transfer of resources come about?

Usually it is quite simple and direct—the more so, the better for both parties, the less time consumed by both, the more time left for the one to find additional worth-while ideas and people to support, and for the other to get on with the important work that warranted support in the first place. But alas, much indirection often prevails; effort by the seeker often is skimped on substance and lavished on procedure.

Out of this tendency has come an interesting mythology about foundations. It doesn't deny the importance of an idea or the quality of the people who will carry it out; but, either treating these as self-evident or ignoring them, it proclaims the how-you-do-it, who-you-know doctrine.

If you use the written word, this doctrine says that it's how the proposal is typed, illustrated and charted; that its words must echo the foundation's annual report or other printed materials; that histories, biographies and detailed descriptions are essential, and that, especially, the proposal must be lengthy and expensively presented.

If you do it verbally, the doctrine says that you should carefully cultivate foundation contacts and exploit them; that you should strive, for reserve pur-

poses, to know a few people who know a few foundation people, and that, if you don't have these direct or indirect contacts, your cause is useless until you do.

And, whether you espouse the written or the verbal method, the real sophisticate points out that the best of all possible ways to score a foundation touchdown is to try to negotiate a neat end-run around the professional staff and carry the ball right to a trustee.

Now, actually, the best way, as I have indicated, is the easiest, simplest, most direct way. What it boils down to is this: A person or an institution needing assistance in some undertaking should first identify some foundation program with sufficiently corresponding objectives and simply state the case.

Let me emphasize: The most important initial step is to find out whether your proposal fits the program of the foundation from whom you plan to seek support. Your approach can be formal or informal, verbal or written. You should want very much to do whatever you propose, and your institution should regard it as really important. Don't promise too much, and try to put yourself objectively in the place of the foundation officer who will consider it. What would you do if you were he?

The Ford Foundation has published a booklet called "About the Ford Foundation."* In a section on "how to apply for a grant," we suggest that a letter of application should contain:

The objective of the proposal, the methods by which it is to be accomplished, the period of time it is expected to take, the funds required and an estimated budget in some detail, the qualifications of the organizations or individuals involved and the organization's eligibility for tax exemption, whether similar projects have been undertaken previously, and whether support has been or is being requested of other foundations.

These, of course, are the suggestions of one foundation only, but our criteria do not, to my knowledge, differ essentially from those of other foundations. Appropriateness to program and excellence of idea and people are the key considerations.

*Available from the Office of Reports, 477 Madison Avenue, New York 22.

LOOKING FORWARD

Gratuities

THE CHRISTMAS SEASON IS A TIME FOR EXCHANGING gifts with those who appreciate the true significance of the Christmas festival. In some cases, in business and industry, the spirit of Christmas has been subverted to a quid pro quo arrangement. Most likely to be open to such exposure are those in positions of purchasing authority.

The giving of gifts to college administrative personnel from outside business and commercial organizations poses a real problem in personal and institutional ethics. What solutions have the college purchasing agent or the business manager worked out to overcome the temptation to accept gifts from vendors?

In the main, commercial organizations usually have pegged those persons in college and university administration who are not averse to being remembered at Christmas time. Obviously, such considerations may have undue influence in the placing of business contracts during the coming year. It's expecting too much of human nature to think that the acceptance of Christmas gifts from vendors will have no effect on the placing of future business.

Tax Problems of Retirement Plans

THE TEACHERS INSURANCE AND ANNUITY ASSOCIATION of America in its November *Bulletin* calls attention to some tax problems involved in the majority of retirement plans established for college and university personnel.

Under the provisions of the 1954 Internal Revenue Code, which applies to retirement plans of industry and other organizations, a more favorable tax treatment is allowed employees of retirement plans "qualified" with the Internal Revenue Service than employees of tax exempt educational organizations whose plans have not been qualified. The purpose of a qualified retirement plan, according to T.I.A.A., is to permit the employer to class his contribution to the plan as a business expense and, for that reason, not subject to taxation. As a tax exempt organization would not gain a tax advantage by classifying retirement contributions as business expense, no attempt has been made to qualify educational retirement plans for this tax advantage purpose.

As it now stands, provisions of the 1954 Internal Revenue Code give several tax advantages to the beneficiary of a qualified plan that are not available to those in nonqualified plans. For example, "on termination of service or death, any payment under an unqualified plan in excess of an employee's contributions is taxed in full

at the ordinary income tax rate. Under a qualified plan, the amount of such excess is taxable at the capital gains rate. Thus, it is taxable at 25 per cent or, if less, at the ordinary income tax rate on one-half of the excess."

According to the T.I.A.A., "the basic objectives of qualification are already being met by educational organizations, and the procedures involved in actual qualification are not useful or applicable in connection with them. Employes under the college retirement plans should be entitled to the same tax benefits as employes under qualified plans, without the college employer having to undergo the process of qualification."

On the representation made by T.I.A.A., it behooves every college administrator to urge amendment of the 1954 Internal Revenue Code so that its provisions will not discriminate against beneficiaries of college retirement plans that have not met the requirements of "qualified" industrial retirement programs. The persons affected will be college faculty and other retired personnel of the college, persons who should enjoy any legitimate tax advantage available to others.

State House Interference

IN MANY STATES, ADMINISTRATORS OF INSTITUTIONS of higher education are discovering that their recommendations and authority are being challenged by the budget officer of the state. This is prompted, in part, by the very high askings of representatives of higher education when they appear before representatives of the appropriations committee of the legislature.

The challenge by outsiders that administrators of higher education prove their case has caused some university heads to hit the panic button. Such panic has encouraged legislative committees and state budget officers to move in and administer when it becomes apparent that a college or university administrator does not have control of his own situation.

If college and university administrative representatives will make certain that they have full information as to the need for a specific educational service, and the costs involved, they should be able to resist successfully the attempts of the state house to move in and run the show. An institution now having trouble in this regard probably asked for it by not being adequately prepared to defend its educational position or to document its requests for legislative appropriation.

Administration of higher education does not belong in the state capitol. Insofar as it has moved to the state capitol, university personnel has been derelict in the full performance of its duties.



For poor old Dad

THE TAX CREDIT PLAN

is the fairest way to finance a college education

THOMAS J. CUNNINGHAM

General Counsel, The Regents of the University of California

SINCE THE END OF WORLD WAR II the college and university population of the United States has risen steadily and already is beginning to assume the proportions of a tidal wave. America's institutions of higher learning are alarmed by the probable financial effect of this impending flood on the Halls of Ivy.

Another harried victim of the deluge is in desperate need of a life preserver—or, at least, a water-logged plank—and that is Poor Old Dad. He will find it increasingly more difficult to meet the considerable expense of putting Junior through college, even impossible to provide similarly for Junior's little brothers and sisters.

The plight of the college student's parent has been receiving more and more consideration in recent years. Various proposals for a measure of tax relief for those bearing the expenses of higher education have been promulgated. These proposals have included: (1) federal scholarships, (2) federal grants to institutions, (3) loans to students, repayable after graduation, and (4) income tax relief for parents or others underwriting college expenses.

A federal scholarship plan has been opposed primarily on the basis that such a program would lead to government control of higher education. Under G.I. bill payments and federal research contracts, disbursement of federal funds generally is controlled by the imposition of moderate but necessary federal regulations. The specter of heavier federal control has alarmed many who would otherwise favor some method of increasing the opportunities for higher education among the nation's youths.

Federal educational grants to states or to the institutions of higher education themselves would get around the

objectionable features of a federal scholarship program. A given percentage of the income tax collected in each state would be used for the support of institutions of higher education, thus avoiding much administrative expense. But it is not certain that the true objective of such a plan, *i.e.* substantial aid to higher education, would be fully achieved. Some would question the propriety of the use of such rebated funds in support of the private institutions.

LOAN PLAN HAS MERIT

A plan proposed by Gov. Foster Furcolo of Massachusetts to lend federal funds to college students, to be repaid after graduation, has considerable merit. It places eventual responsibility for the cost of public education on the individual recipients, rather than on the tax paying public in general. The Furcolo proposal, however, would require a vast bureaucratic network to administer the program. Moreover, it would appear to operate in favor of the relatively inexpensive public institution as opposed to the more expensive private college, as student debtors would seek to minimize their future financial obligations.

The least objectionable plan, from the standpoint of lack of federal controls, and most effective, from the standpoint of promoting higher education through an equitable provision of monetary assistance, would be one affording direct individual income tax relief for parents or others bearing the expenses of higher education.

Individual tax relief proposals have taken several forms. Various plans have advocated relief through tax deductions, exemptions and credits.

A survey of a number of bills introduced in the first session of the 85th Congress indicates the general

format of aid through individual tax relief plans. A grouping of the proposed legislation in accordance with their respective approach to the problem, *i.e.* through tax deductions, tax exemptions and tax credits, may prove helpful for purposes of analysis and comparison. The bills are summarized as follows:

1. Tax Deductions. House Bills 808, 4419 and 6459 are identical in form. They amend Section 151 of the Internal Revenue Code to allow a taxpayer to deduct amounts paid for the college or university education of a dependent while he is "pursuing such education." This deduction applies to those amounts that exceed the usual \$600 exemption. "Dependent," apparently, is not restricted to a child but may include brother, sister, father, mother, nephew, niece and the like, more than half of whose support is provided by the taxpayer.

Senate Bill 433 and House Bill 3113 are identical in form. They would allow a student taxpayer to deduct certain educational expenses incurred by him. These would include tuition, fees, books and supplies. The deduction would not include travel, meals and lodging, or fees refunded.

Senate Bills 1797 and 2479 contain similar provisions. Senate Bill 2479 allows the taxpayer to deduct certain educational expenses incurred by him, his spouse, or by his dependents. Deductible expenses include required tuition, fees, books and supplies but do not include amounts paid for meals, lodging or other personal or living expenses. Senate Bill 1797 limits "dependents" to children or stepchildren of the taxpayer. Deductible expenses include tuition, fees, books and supplies and, in addition thereto, a maximum of \$1000 for travel and living expenses (when living away from

home). Each bill reduces the allowable deduction by amounts received under veterans' educational benefits and tax exempt scholarships.

House Bill 9414, in addition to providing a deduction for the tuition and textbook expenses of the taxpayer or his dependents, allows a deduction to the extent college living expenses exceed those that reasonably would have been incurred if the student had lived at home.

2. Tax Exemptions. House Bills 195, 590, 2868 and 3114 and Senate Bills 175 and 432 provide additional exemptions from the taxpayer's individual income for dependents attending college. House Bill 3114 and Senate Bill 432 provide additional \$600 exemptions for each child or stepchild of a taxpayer who is under 23 years of age and is attending an educational institution "above the secondary level" as a full-time student. Exemptions also are allowed for the student taxpayer and his student spouse. The provisions of Senate Bill 175 are virtually the same except that no deduction is allowed for the student taxpayer or his student spouse.

House Bill 2868 provides an additional exemption for a student taxpayer, for his student spouse, and for each dependent student child or stepchild who has attained 16 years of age. "Student" may include, apparently, high school students. House Bill 590 increases the basic exemption from \$600 to \$1000 and provides an additional \$800 exemption for each dependent child under 21 years of age attending "any business school, college or university."

House Bill 195, in its entirety, reads as follows: "That as an incentive to higher education an allowance of \$1200 instead of the present \$600 be made to parents for each of their dependents for each year such dependents attend college, as a deduction from income tax."

3. Tax Credits. House Bill 4597 and Senate Bill 868 are identical in form and are cited as the "Educational Tax Credit Act of 1957." The act provides for a credit against individual income tax of 30 per cent of amounts paid by the taxpayer for himself or any other person to an institution of higher education for tuition and fees. The individual receiving the education must be a full-time student (*i.e.* at school at least five calendar months).

The maximum credit allowed hereunder per supported individual is \$450

and the imposition of such credit may not result in the refund of taxes paid by the taxpayer during the tax year. The amounts paid by the taxpayer upon which the 30 per cent credit is based may not include funds received under nontaxable scholarships and 30 per cent of any allowances given under the Veterans' Readjustment Act of 1952.

Proposals for tax relief by way of the deduction and exemption method may be criticized by some on the basis that such plans result in greater benefits to a taxpayer in a higher tax bracket. One laudable effect of the deduction plan would be the impetus it provides for making use of the generally more expensive private educational facilities, thus easing, somewhat, the burden of our overcrowded public institutions.

SIMPLEST, FAIREST SOLUTION

A review of the various tax relief plans currently being advocated would seem to indicate that the tax credit proposal, in one form or another, is the most desirable method to pursue. It achieves the simplest, fairest and most effective solution to the serious problem of financing a college education.

The tax credit plan, unlike the deduction and exemption plans, provides equal relief regardless of the taxpayer's bracket. Like the deduction and exemption plans, it provides little opportunity for the formulation of extensive federal regulation so objectionable in federal subsidy proposals. It could be administered within the existing framework of the Internal Revenue Service with little, if any, additional overhead expense.

Finally, and of most import, the tax credit plan would accomplish the desired result. The plan would lessen considerably the burden of college expenses and afford an opportunity for higher education to those qualified youngsters who would not otherwise have been able to continue their education.

The American Council on Education, in a report issued on Feb. 1, 1955, reported favorably on a tax credit plan, similar to the Educational Tax Credit Act, as a way to help finance higher education in the future.

The Tax Credit Act, as presently drafted, provides essentially the tax relief features sought by the American Council on Education. Some modification of the act is suggested, however.

The act would appear to be more beneficial to residents of community property states when the children of such residents are attending colleges charging more than \$1500 per year for tuition. Since the spouses share the ownership of the community property, each spouse may be entitled to claim a 30 per cent tax credit under the act for a family total in excess of the \$450 maximum credit imposed upon individual taxpayers elsewhere. It may well be that the framers of the act would desire to eliminate this inequitable effect prior to passage.

It is suggested also that some fixed allowance be provided to reflect expenditures for textbooks and other necessary educational equipment.

In summation, it is generally acknowledged that both colleges and families of college students are facing an ever increasing problem of rising educational costs. Proposals for direct federal subsidies appear unsatisfactory because of the possibility of federal regulation and because of the apparent necessity of a vast bureaucratic network to administer such subsidies.

The most desirable method of providing federal aid would appear to be through some sort of individual income tax relief. The most equitable and most effective tax relief plan would seem to be the tax credit method. Under this method taxpayers, regardless of bracket, are benefited equally. The plan would appear both simple to administer and difficult to abuse.

WOULD HELP PRIVATE INSTITUTIONS

Under the tax credit plan, the private institution would benefit because of the opportunity to raise its tuition somewhat in view of the increased ability of the payer of the tuition to absorb the increase. The overcrowded public institution would witness a welcome diversion of new registrants to private institutions at insignificant added cost to the general public.

In the last analysis, it would seem that the easiest and fairest way of financing the flood tide of students bearing down upon us is through the tax credit method. It will be repaid with interest by the thousands of young men and women who will provide our contemporary society with the enormous amount of professional and technical talent it so desperately requires. And Poor Old Dad, whose pay check takes such a beating, will get some relief, too! #

RECENT YEARS HAVE SEEN A RASH of institutional and inter-institutional "cost" studies of varying purposes and degrees of magnitude. All have been interesting, to say the least, and some probably have served a useful purpose. One has only to sit in the planning sessions of one of these studies, however, to realize that there is a considerable difference of opinion, and perhaps some confusion, as to what should or can be accomplished. It soon becomes apparent that, in some cases at least, such studies are undertaken with no really sound knowledge as to what an educational institution really is and how the results of such a "cost" study can be meaningful or useful.

The purpose of this article is to lay out a conceptual framework with respect to institutional costs, studies of these costs, and the uses of the results of such studies.

WHAT DOES A COLLEGE PRODUCE?

Fundamental to any institutional study is the question: What is it that a university or college actually produces? Some analysts have likened a university to a manufacturing plant that takes the student (raw material), processes (educates) him, and turns out a "finished" product. This concept is not at all satisfactory from an educational or philosophical point of view. Further, it appears of no particular value as a starting point for a study of "costs" or "efficiency."

Much more realistic and satisfying is the idea that what the university provides is an environment for learning. The student has an opportunity to be exposed to this environment. What happens to him in the process depends both upon him and upon the environment. The university does not "produce" or "process" the student. But it does produce the environment, which is the "product" in our productive process.

ECONOMICS OF THE MATTER

Since human desires appear insatiable and since the resources available to fulfill these desires are always limited in quantity, it is wise policy to attempt to produce a specified quantity of any given good or service with the least costly combination of factors used in production. This principle applies to an educational institution as well as to any type of productive enterprise. Given a certain educational goal, it is socially desir-

Making the Best of Limited Resources

can be accomplished only
through appropriate cost studies

JOHN W. HICKS

Assistant to the President, Purdue University, Lafayette, Ind.

able to attain that goal by using the least expensive combination of factors.

If a given educational environment to which the student is to be exposed is designated as Y , then this environment may be created by some combination of factors including professors, books, classrooms, laboratories, administrators and so forth which may be designated as $X_1, X_2, X_3 \dots X_n$. Thus, the environment may be considered as some function of these factors: $Y = F(X_1, X_2, X_3 \dots X_n)$.

For a given Y , there are probably dozens or more combinations of X 's. One of the basic problems of administration is to discover the combination that costs the least. There also are a multitude of Y 's (environments) that may be created. A second basic problem of university administration is to determine which Y is the most desirable environment to which to expose the student: In which environment will he learn the most? The choice of this environment, of course, always is limited by the quantity of resources available; few, if any, can afford perfection.

While the aggregate production function— $Y = (X_1, X_2, X_3 \dots X_n)$ —properly may apply to a college or university as a whole, it is a practical impossibility to say or do much about it in an aggregate sense until the individual production functions of the basic building blocks of the aggregate function have been considered.

The building blocks are the individual courses or, more properly, classes. (Here class is used to mean each individual division or section of each course.) Every class offered has its own individual production function, in general form exactly the same as the aggregate function. It may be designated by the lower case: $y = (x_1, x_2, x_3 \dots x_n)$.

Here y is the environment for learning offered by the individual class. The factors x_1 may be the portion of a certain type of professor required to create this environment, x_2 the number of hours of a certain type of room, x_3 the amount of assistance or clerical help, x_4 the supplies required, and so on to x_n . A summation of the individual production functions of each class, plus the over-all university factors required for academic and business administration, results in the aggregate production function for the institution.

Now all of this is so simple as to be obvious without reference to X 's, Y 's, equations and so forth. Yet such statement does help to clear away some of the academic brush and points out certain definite conclusions with respect to costs and methods of reducing costs:

1. The total cost of producing any given class (or curriculum or total university environment) can be de-

creased only by: (a) decreasing the quantity of factors going into the creation of that class (or curriculum or total environment); an example would be to teach the class with less of the professor's time, while somehow maintaining the quality of the class; (b) somehow purchasing the factors involved at a lower price (*i.e.* paying the same professor less money); (c) rearranging the factors so as to create the same environment at a lower total cost (*i.e.* substituting cheaper factors for more expensive factors—less professor, more teaching assistants).

2. Unit costs (costs per student) can be reduced only by action such as in (1) above, or by increasing the total number of students in the class, curriculum or total environment more rapidly than the factors (and their costs) making up the environment increase.

3. The only other method of reducing costs is to change the nature of the environment itself to an environment that can be produced more cheaply. Here the question must be answered as to whether the new environment is as effective. Or, is the loss in effectiveness worth the reduction in cost? (In some instances, the new cheaper environment may prove to be more effective, even in an absolute sense.)

TWO BASIC TYPES OF STUDY

To consider the problem in the manner described also leads to the conclusion that there are two fairly different and separate types of research with respect to instructional costs and methods of reducing these costs.

1. Fact-finding, concerning the factors involved in providing the environment being created at any given time. This will be referred to as "status quo" research.

2. Critical evaluation of the educational effectiveness of a given environment and the development of new environments that may be more effective or less costly. This will be referred to as "developmental" research.

Status quo research involves study of what actually goes into any given program of instruction, from the individual class to the over-all institutional environment. Beginning with the class itself, data are required as to all of the inputs: what part of what type of professor; how much assist-

ance; what type of room or laboratory, special equipment, supplies, clerical help, and so on? In other words, what quantity and quality of physical factors are used to create the environment represented by each individual class offered. Above the individual class level similar physical data are needed with respect to the quantity of administration, student services, related activities, and all of the other inputs involved in a college or university.

Also required is information on the number of students enrolled in each class, the projected future enrollment, and some estimate of the maximum size to which each class can grow before an additional class must be created.

This first type of data is almost completely descriptive, and while requiring care and proper accounting techniques in its compilation can be gathered without any real analytical effort. It boils down largely to a compilation of all of the physical inputs going into the creation of the educational environment by an institution at any given time. But once these physical input data are gathered, it is possible to project future needs and costs for any projected enrollment and cost situation of a given educational environment.

Included in this first type of research is much of the work on space utilization that many institutions already have undertaken. Necessary to it are many of the devices of accounting, inventory control, and so forth now being developed. But in the last analysis it is largely descriptive of what is being done at any given time and takes no real account of the nature or quality of the educational environment being created.

Developmental research, that of measuring the quality of the environment or the alternative effectiveness of different environments, is quite a different matter. A simple example of the problem here might be: Can mathematics be taught as effectively in classes of 100 as in classes of 30, and if so, how? Or, a much more complex problem: Which of two or three or a dozen alternative curriculums produces the best engineer?

Many questions of this type have been, and will continue to be, answered by the fairly subjective judgments of faculties and by experience. This is quite proper and correct, and in many instances the only practical

solution. But there are many areas where careful and specific research is needed, particularly when changes at the individual class level may make significant cost reductions or improvements in the environment offered.

Examples long considered in this area are research concerning the effect of class size on student performance, running through such things as the value of quiz or discussion sections, the effectiveness of teaching by television, possibilities of more "self-teaching" by students, and so on. Hundreds of research projects have been and are being carried out on subjects of this general nature. In thousands of cases individual teachers, departments or schools have, through experience, arrived at at least tentative conclusions on questions of this type and have instituted policies based on these conclusions.

The interrelation of these two types of research is obvious. Whenever a change in policy with respect to the environment or its method of production takes place, then new data must be collected concerning the physical factors needed to produce the new environment. On the other hand, study of material describing the factors involved in creating a given environment may indicate that the costs of creating that environment are high. This, in turn, would serve to stimulate research or thinking as to how the same environment might be produced at less cost, or, perhaps, modified.

WHO CARRIES OUT RESEARCH?

Who, within institutions, should carry out the two basic types of research mentioned will depend largely upon the organization and personnel of the university in question. The first type, that largely of description of the current situation, can perhaps be most effective if centralized in a bureau of institutional research: the president's or academic dean's office, or even the business office.

While the source of many of the data will be in the schools and departments, it probably can be gathered on a semester basis with a minimum of effort on the part of faculty members, once they become used to it and understand its purpose. Many of the other physical data may be sketchy at first, and may sometimes be listed in dollars rather than in physical units, particularly when the quantity for a particular class is small. Many of these data will be subject to continual refine-

ment and it often will not be worth the effort to be overly concerned with the second and third degree of smalls. Nevertheless, in the long run it really is most desirable that we have a fairly good idea of what we are using to get the job done.

Developmental research seems more likely to belong in the various schools and departments making up the university or college, rather than in a centralized agency. It is, after all, the faculty members who eventually must decide, with the resources at their command, just how they are going to create an educational environment and which of several alternate environments dissatisfies them the least! Clues to where such research is needed may come from above. Pressures to find less expensive, but equally effective, environments will come from the general economic squeeze on higher education. A central agency may supply statistical advice and other expert counsel. If it is a solid and long accepted agency, it may even appear to be doing the job itself. But acceptance of the results still will rest on the faculty.

In most instances this developmental research may be in the form of what is really only a partial analysis. While it would be ideal to subject all aspects of the learning environment to analysis and come out with the "one best" solution, this, of course, is not possible. Often, it will be necessary to begin with an existing situation and attempt to find whether one specific change is desirable. An example might be: Is it possible to teach freshman chemistry with a demonstration rather than a laboratory, thus effecting a saving of many dollars? This actually is very much of a "partial" approach, since some might argue that the real question is: Should we teach freshman chemistry at all? But we must progress step by step.

OF WHAT USE ARE COSTS?

The costs developed in the status quo research actually are only a historical record of expenditures for creating one specific educational environment for one specific number of students at one specific level of prices. Their greatest use, at least in a publicly supported institution, probably is to give a measure of exactness to legislative requests. Beyond this, they have only a historical value.

The information concerning the physical factors that go into making up a given educational environment,

Yes, we need fact-finding research.

Too, we need developmental research on how, with limited resources, we can create the most effective educational environment for our product—the students.

however, is extremely useful in planning for the future since it permits estimation of costs regardless of price levels, and also an estimation of the cost involved in changes in the environmental situation offered.

The misuses of costs perhaps overshadow their use. The greatest of these misuses is that connected with the myth of linearity. Even though they really know better, wise men often project current costs to new situations, overlooking the fact that for virtually any type of productive process the cost curve is curvilinear in nature. This, of course, is a cardinal sin. If the analysis is based upon physical factors, rather than merely dollars, the sin, though still possible, is less likely to be perpetrated.

INTER-INSTITUTIONAL STUDIES

Most of the so-called "inter-institutional" studies have attempted to compare costs and factors affecting costs among institutions. The big question always has been: Are such comparisons valid? A rigorous consideration leads to the conclusion that in most cases the answer must be in the negative. There are a number of reasons for this, even if every attempt has been made at arriving at a standard classification.

To some degree, the environment each institution is attempting to create is unique. This is particularly true in large, complex institutions. It is thus obvious that the right side of the equation (the X's) is bound to be different for different schools since the left side (the Y's) is different. Only by the merest chance could the X's be the same.

Even if each institution were attempting to offer exactly the same environment, a comparison of costs alone would not be valid unless the entire cost curves of the two institutions were known, because of the non-linearity mentioned. In fact, two schools might have, by chance, exactly

the same costs at a given instant, yet at no other time in all the world!

If properly conducted, comparative status quo studies can be of use if employed with care. Where it is felt that the attempt is to create fairly similar environments, such studies will demonstrate some of the differences in approach and indicate if a particular school is far out of line in costs. Perhaps the greatest value of such studies is to demonstrate to staff members of a particular school that they are as well (or badly) off as faculty members elsewhere. In any case, it is not worth the effort to repeat such studies often. Repetition only further reconfirms what we have known for years: The easiest way to reduce cost per student is to increase class size.

In the area of developmental research, inter-institutional exchange of research conclusions may be of real value if academic and business administrators are willing to recognize that methods of creating the learning environment as developed in other institutions and subject fields are perhaps valid and worth trying.

The research needed in the area of higher education is limited only by the resources available to carry it out. Specifically, however, several points can be noted.

In the area designated as status quo research, the real need is for methodology in the realm of fact-finding. How do we actually go about determining the portion of a professor, and other factors, that go into a class? Can we rely on department heads' judgments? Should we go to faculty members themselves? Can we develop standards that can be used year after year? What types of accounting methods are most useful in finding other inputs used? Can we develop standards in this area too? How should, or can, we allocate fixed factors, and so forth? Many of these questions can be answered only after painstaking, trial-and-error experimentation. But they need to be answered.

In the area of developmental research, the possibilities are virtually limitless, but all boil down to the same general question: How can we create the most effective educational environment with limited resources?

The years ahead will tax U.S. colleges and universities to such an extent that we can afford to be satisfied with nothing less than a real effort toward optimum utilization of the all-too-few resources at our command. #

A Registrar's Answer to Student Personnel Accounting

L. F. GILCHRIST

*Director of Admissions and Registrar
West Virginia Institute of Technology, Montgomery*

WHEN IN COLLEGE, ALONG WITH most other students, I underwent considerable discomfort during quarterly registration. We seemed to be getting writer's cramp from filling out all the required cards, many of which were duplicates. At that time I vowed that if ever I were in a position to do so, I would eliminate this seemingly unnecessary duplication of effort. The opportunity came in the spring of 1954, when I became director of admissions and registrar of West Virginia Institute of Technology.

I had observed a member of our naval reserve unit adapt the marginal punched card used by a large chemical corporation to his use in keeping statistics on personnel in our unit. This memory stimulated me to start streamlining and revamping our registration and record keeping procedures.

In 1954 we designed a student history and a class assignment and grade report card. The student history card, owing to its flexibility and versatility, is still being used and will continue to be used without revisions. Because of economic circumstances, the class assignment and grade report card has undergone one revision. At its inception it was only a single card. When we revised it refinements and improvements were made and it is now in quadruplicate.

In revising the class card, we designed it so that any state or private college in West Virginia could use the same card. The only modification

needed would be to change the name and address of the institution.

STUDENT HISTORY CARD

The student history card (Fig. 1) is a buff colored card, $7\frac{1}{2}$ by $6\frac{1}{4}$ inches, with brown type. The information contained on this card is equivalent to the registration book formerly used, which contained 10 cards that the student had to fill out during registration each semester. As far as is possible, information requested from each student is obtained by a check mark or an "X."

At registration the student is given one of these cards, together with a multilithed "Sample" showing in marginal notes just what blanks pertain to him. He fills out all blank spaces applicable to him, and the card is checked at least three times by faculty members and office personnel for accuracy, neatness and completeness.

At West Virginia Institute of Technology the physical arrangement of the offices is such that a single card is all that is necessary. The registrar has a large central office where all files and records are maintained. Opening into this central office are the private offices of the dean of the college, the director of guidance, and the registrar. Across the hall are the offices of the president, the business manager, the dean of men, the dean of women, and the director of field services. However, for institutions where the offices are separated or in other buildings, this card could be

manufactured in manifold, with waxed carbonized forms for distribution to the offices that require part or all of the information contained on the card.

When the registrar's office receives the card it begins to process it for the permanent files. A student code number is assigned to each student on the basis of a 3000 numerical-alphabetical correlation: 1 for "Adams," 8 for "Allison," 13 for "Anderson," and so on. The purpose of this numerical but nonconsecutive sequence is to retain a reservoir of unused numbers for students entering after registration. This student code number, together with all pertinent information furnished by the student, is then ready to be notched on the card. All of this information is coded around the four margins of the card.

A point to remember in designing the cards is to code the information that is most infrequently used. Note that at the top margin of Figure 1 we have coded "Female" but not "Male." Since we have a preponderance of male students we have to notch the student history cards of only the women enrolled.

A few illustrations will show the flexibility of the cards. At the left side of the top border of Figure 1, you will notice "Relig'n." Above this are the abbreviations "Heb." "R.C." and "Prot." During the registration of the first semester that we used this card, we observed that the student body was composed largely of Baptists, Method-

Fig. 1—Student History Card

At end of 1st semester hole is notched for each student re-enrolling for 2nd sem. For new--transfer--re-entering students hole is left intact. This facilitates sorting for statistical purposes.

Scholarships coded as to Type- 1 to 9

Used for year of birth. Last 2 digits of year notched, i.e. 1925--The 2 and 5 notched. May go to 99 yrs.

All vets-550-16-346-894

State Rehabilitation

Used for 55 counties in W.Va. and 48 states, plus 51 foreign countries.

Hours-Quality Points--Index-- Recorded for 1st semester. Used for statistical purposes.

Hole notched for students making "Dean's List."

Student's Code Number
10-90 1-9
100-900
6-3000
5-2000
4-1000

Nurses
All engr. students

Used when a student withdraws during a semester

Hours--Quality Points--Index-- Recorded for 2nd sem. Used for statistical purposes.

Hole notched for students re-enrolling for 2nd semester.

Note: Three waxspot carbons are placed on top of each card and are bonded along the top and bottom edges.

Fig. 2—Class Assignment and Grade Report Card

Dept's--From 1-99 Class Days Class Periods Each instructor is assigned a number with these 8 holes. Possible to have from 1 thru 99 Instructors.

Course Numbers
1-9
10-90
100-200
300-400

Academic year
Last digit only.

Summer
Sem. 1st-2nd

Transfer or
Withdrawal
(from class)

Extra
holes.

Notched out for
Women Students

ists and Roman Catholics. We have just a smattering of other faiths. By simply changing our master code card, we converted "Heb." to "Bapt." and "Prot." to "Meth." To compile lists of the various denominations for the clergymen of the various churches, we ran the needle through the three holes and had the majority of students in alphabetical order by denomination. The few not dropping in this process were then sorted by hand into the other denominations, and lists were typed for the clergymen.

Note the hole in the upper left-hand corner of Figure 1. With the gangpunch we notched this hole on cards of students re-enrolling for the second semester. We did not notch cards of new and transfer students entering between semesters. For statistical purposes it was very simple to run the needle through this hole and separate new and transfer students from first semester students. At the time of registration we corrected the cards of re-enrolling students whose addresses had changed. If they changed their major or minor areas we entered such changes in the appropriate blocks in red pencil, placing "1st" for the major or minor area of the first semester and "2d" for the new major or minor area.

After installing the marginal punched card system, I encountered

many requests for reports of which I had known nothing. Again the flexibility of the student history card proved itself.

At the end of each semester it is necessary to make a dean's list and also a list of the index-standing of all students enrolled. The number of semester hours, quality points, and index are tabulated with a calculator for each student and are recorded in the blank at the left-hand line at the bottom of the card proper. The cards are sorted, by hand, from the highest index to the lowest, and reports are typed. With the use of the sorting needle, the cards are then re-alphabetized in a breakdown and sequence procedure. This is done in approximately 30 minutes. The same procedure is followed for second semester; the only change is that the data are recorded on the lower right-hand line. The accumulated data for the entire year are recorded in the center of the bottom line.

The student history card is used extensively also in keeping vital statistics for the veterans. We have codes for Public Laws 550, 16, 346 and 894. At the end of each calendar month the cards are sorted, and information as to load and withdrawals from class or school is noted in making up the monthly V.A. Form 7-1996a.

We are confident that as additional data and reports are required we can

obtain such information easily by simple adaptation of coding on this card.

ASSIGNMENT AND REPORT CARDS

The class assignment and grade report card (Fig. 2) is $3\frac{1}{2}$ by $7\frac{1}{2}$ inches, with three carbonized forms, bonded at the top and bottom, on top of the master card. The top copy is printed in black ink and is used as a class-entry permit for the student. The second copy is printed in brown ink and is used for recording and mailing the midsemester grade. The third carbon is printed in blue and is used in mailing the final grade. The master card is printed with green ink and is retained in the registrar's office for recording the final grade on the student's permanent record card.

After the personnel in the registrar's office has recorded the final grades, semester hours, and quality points on the student's permanent record card, we have found that the class assignment and grade report cards are no longer needed in this office. Consequently, we are now following the practice of stapling the hard copies of the cards of each student together. They are then sent to the student's counselor so that he may have the same information on the student that the registrar's office has. The procedure tends to be most efficient for individual counseling and saves time and effort.

Fig. 3—Class Assignment and Grade Report Card

for both the counselor and the registrar's office.

At the conclusion of registration, we alphabetize the cards for each section and class with the needle and detach the top copy of each card. As previously mentioned, these cards are in quadruplicate and are unit-blocked at top and bottom to facilitate handling. A crew of student assistants then detaches the admission slips (top carbon) for each instructor, by department, class and section. These, too, are in alphabetical order. These are then placed in the faculty mailboxes, and the faculty has, prior to its first class meetings, alphabetical lists of students enrolled in each class and laboratory. Incidentally, in detaching the top carbon we started using pencils along the bonded edges, then envelope openers. We finally tried regular table knives, and these worked marvelously!

As soon as the dean's schedule of classes is available, we cut addressograph plates for all classes, sections and laboratories. We found that it was speedier and more economical, because of wastage of cards and office labor, to postpone this step and the gang-punching of the code numbers on classes until the end of the schedule changing period. As all registrars know, a great many schedule changes are necessary.

At the end of the change period, student help is used in addressographing each card for each class and/or section or laboratory. The cards are then gang-punched. All information contained on the addressograph plate is punched in proper coded holes (Fig. 3). All cards are then, through a breakdown and sequence operation, sorted into alphabetical and numerical order by the use of the name code notches. It is possible to use inexperienced help in this and other sorting operations. The operation used is done rapidly—in hours, where it formerly took days.

USE OF CARDS

As previously indicated, the class assignment and grade report card is in quadruplicate. The first carbon copy is detached for admission and class roll purposes.

All cards are mechanically sorted into alphabetical and numerical sequence. Master lists, giving each student's number, are made, and they are readily accessible at desks and by the trays of cards. The student history cards carry the same number and are alphabetically maintained. Someone, however, might be using these cards

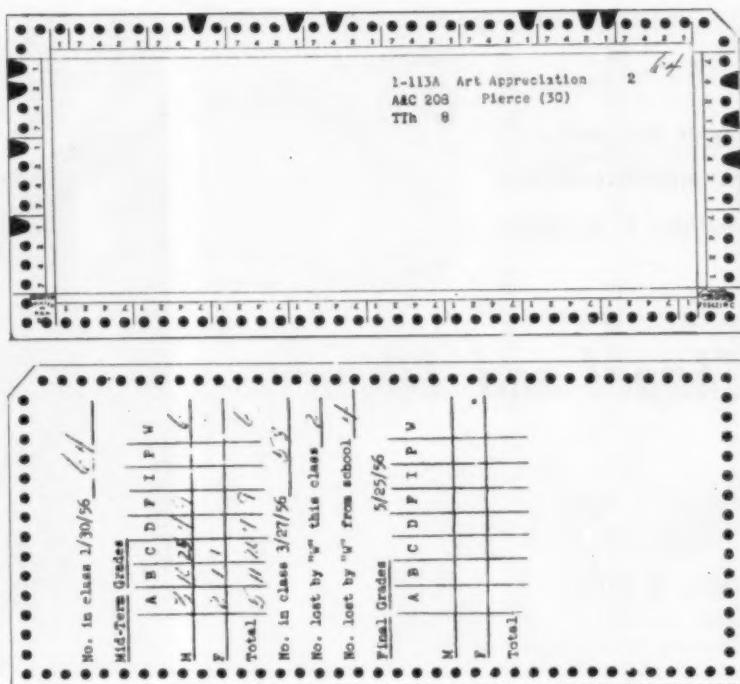


Fig. 4—Control Cards

for reports, and they would be out of order. The master list is then consulted. All cards for each student, of course, are together and are ready for immediate reference as to the class, hour, building and room where a student might be at a particular day or time.

The day before midterm grades are due in the registrar's office, the thousands of cards start through first a breakdown and then a sequence procedure. Within a few hours all classes, sections and laboratories for each instructor are arranged in alphabetical order and are placed in his mailbox. In this breakdown and sequence sort, a production line procedure is utilized, and inexperienced help can become proficient in a short time.

Using a pencil or ball-point pen, the instructor records on the card the number of times absent and the grade for midsemester. These two figures, through the carbons, print on the blue carbon and also on the master card.

When these cards are returned to the registrar's office, the grade is notched and a breakdown of grades for each course is recorded on a control card (Fig. 4).

From the time of registration to the time the grades are finally recorded on the student's permanent record card, grades are transcribed but one time.

That is from the final grade report, shown on the class assignment and grade report card, to the student's permanent record card.

CONTROL CARDS

At the time that cards are run through the addressograph, a blank card is inserted and, through our process, is addressographed and gang-punched along with the other cards for each class, section or laboratory. On the back of this blank card we mimeograph a grade-breakdown form (Fig. 4). The grading system by male and female appears for both midsemester and final grades. Blanks for withdrawal from individual classes and also from school are shown.

This set of cards acts as our control set. From them we can determine the number of students in a particular class; the drop-outs both from this class and from school; the grades, both midsemester and final, distributed by grade and sex; the number of classes, sections and laboratories each instructor has; the building and time at which each class is being held, each hour and day of the week. They are used also as master cards in the scheduling of buildings, rooms and instructors for future semesters, as sources of information for grade distribution, and as guides in making schedules for examinations.

**Under one roof
Wittenberg combines
facilities of a college**

Chapel and Library

LOUIS H. FITCH

*Business Manager
Wittenberg College, Springfield, Ohio*

THE DECISION TO LOCATE A LIBRARY with a capacity of 200,000 volumes under the same roof with a college chapel came about at Wittenberg College, Springfield, Ohio, through the decision of President Clarence C.

Stoughton and the board's buildings and grounds committee.

"We estimated that construction of separate chapel and library buildings would cost about a million dollars each," Dr. Stoughton explains, "but by

locating both facilities under one roof and on one foundation, we have saved about half a million."

To establish a separate identity for each facility, the building was placed on a steep slope so that Weaver Chapel



Above: Entrance of the building which opens into the library garden. The COVER PICTURE is an exterior of the Chapel-Library Building showing the 212 foot tower.



Left: One of the two main reading rooms in Thomas Library, which occupies the three lower floors of the new building.



Carrels for individual study in the library's two central "stack" areas on lower two floors. The first floor also contains four private rooms where students listen to records.



Reading alcove on second floor. There is study space for 350 students in the new library, which has room for expansion to an ultimate capacity of some 200,000 volumes.

is at the top of the four-floor structure and, when viewed across the rolling wooded campus, appears to be standing almost alone. Thomas Library, occupying the three lower floors, emerges to view from the east or valley side; this section has a wing at right angles to the main structure.

The two facilities are unified and connected by a 212 foot freestanding tower. On the chapel-library tower, as symbols of the partnership of Christianity and culture, are 9 foot statues of six great religious and cultural figures: St. Paul, St. Augustine, Martin Luther, Johann Sebastian Bach, John Milton, and Gottfried Leibnitz. Sculptured from Indiana limestone, each figure weighs about 3800 pounds.

The chapel seats 1100 persons. The main entrance is through the tower, and inside the entrance hangs a mahogany chandelier carved with signs of the zodiac by Albert Krause of Philadelphia. Above the doors of the transept entrance to the chapel at the northwest corner of the building will be 24 stained glass windows depicting events in the college's history.

Side windows in the chapel evidence a new approach to stained glass fenestration. Lead is used for the graphic portion of the design and the glass is the background. When the inte-

riors of these windows are polychromed, the lights at night will give each window the appearance of a painting when viewed from the outside.

A huge mural on orlon canvas done by Louis Ewald and James Bonelli decorates the chancel wall. An 11 foot wooden cross is suspended in front of a red dossal curtain, embroidered with palm branches, which rises from chancel floor to ceiling, a distance of 46 feet. The altar of yellow Sienna and green Monte Verde marbles came from Italy and weighs 7½ tons.

Behind the dossal curtain are the three chambers containing the 10 miles of electrical wiring and the 3000 pipes of the three-manual organ.

Arches over sanctuary and nave are reinforced concrete. The concrete is exposed throughout, and off-balance arches over the nave come down on a long concrete beam over the columns on one side and return all the way to the floor on the other side.

Because the nave is so high—50 feet 9 inches—the floor is warmed by radiant heat; window areas are offset by baseboard radiation.

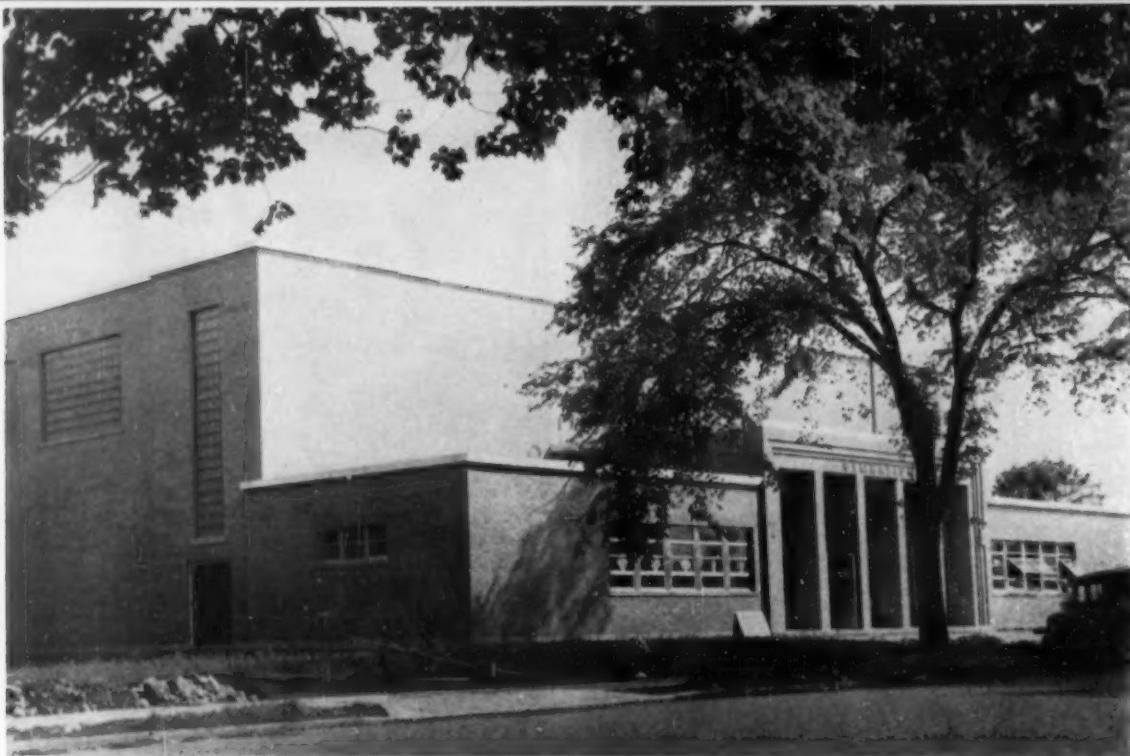
Thomas Library, on the three lower floors, has room for expansion to more than 200,000 volumes and contains

study space for 350 students. It has two main reading rooms and two central stack areas; individual study tables are located in the latter areas. The main desk is on the second of the three floors, and the first floor contains audio-visual classrooms and the A-V aids office.

On the third floor are the Treasure Room, now used as a faculty and board meeting room but eventually to contain the college's rare book collection and its three rare Oriental rugs, and the Wittenberg and Lutheran Room, containing historical material about the college and minutes of Wittenberg's supporting church synods and the United Lutheran Church in America.

Architect T. Norman Mansell of Philadelphia designed the chapel-library building. The Church Architectural Guild of America recently granted him a special award for meritorious service in creating "one of the most exciting church buildings in America."

Attendance at chapel is voluntary, but since the new building has been in use, daily chapel attendance has increased 30 per cent and averages 503 students. Use of the library, too, has greatly increased since the new building was opened. #



University of Bridgeport builds

Gymnasium to Serve Both Sexes

DAVID A. FIELD

Director of Arnold College Division

WILLIAM T. NOWLAN

Superintendent of Buildings and Grounds

THE NEW UNIVERSITY OF BRIDGEPORT gymnasium, completed in September 1956, is a coeducational physical education plant large enough to handle the anticipated 10 years' growth rate on 57,000 square feet, the largest area available on an urban campus. Since the university is located in an "A" zone, it was imperative to build with property lines in mind. The outcome was a split-level type of fireproof building of 42,266 square feet, which cost \$12.50 per square foot.

The gymnasium is used for varsity and freshman basketball games, inter-collegiate fencing, and baseball and tennis practice, as well as intramurals and physical education classes. In addition, numerous campus events, such as musicales, convocations and dances, are accommodated.

A functional building of contemporary lines, the exterior walls are 8

inch concrete block and 4 inch face brick. This three-hole core brick is dark manganese gray. East and west walls have insulated glass blocks at a height of 20 feet from the floor, which run the entire length of the gymnasium floor. Aluminum projected windows are used throughout. Main entrance doors are of satin-finish aluminum with one pane of glass. All other exterior doors are of flush birch.

On the north end of the building are four offices for the faculty, so located because of proximity to the main campus. A small classroom in the center probably will be converted into a physical fitness laboratory.

On the south end of the gymnasium, next to the lobby, are three offices: one for the athletic director; one for the director of physical education, and one for their secretary. On the other side of the lobby is a large classroom. The lobby has a floor of quarry tile

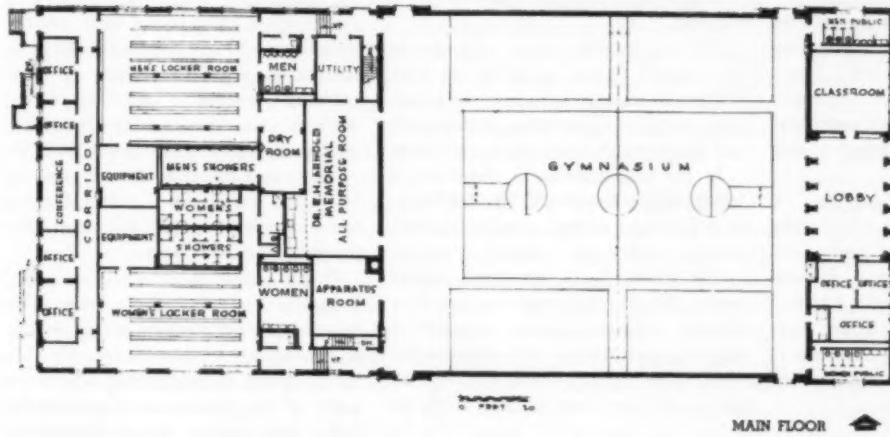
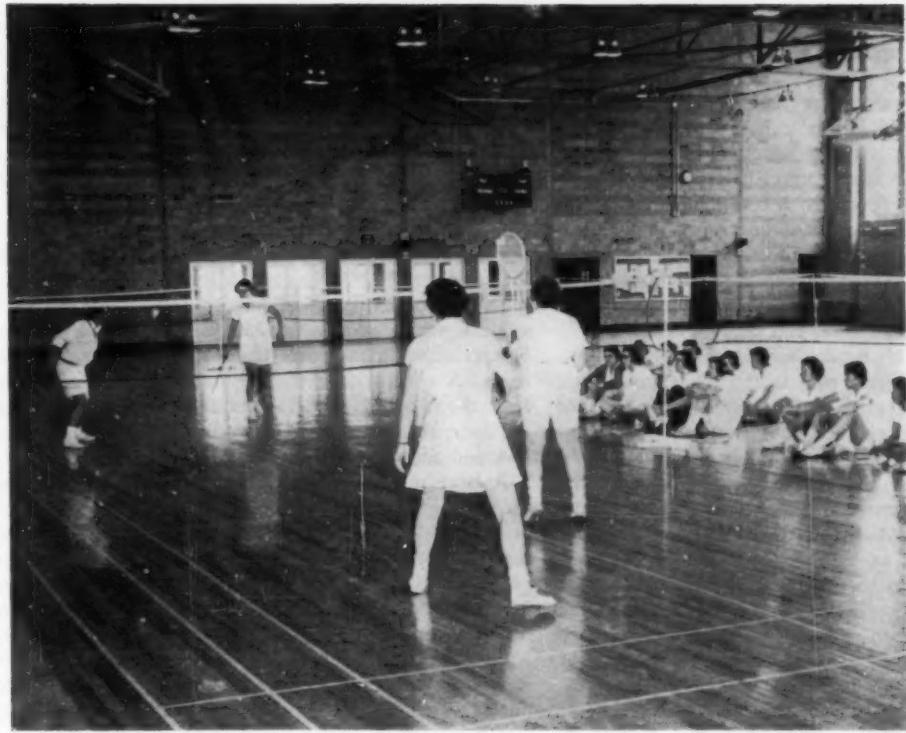
and walls of fiber glass bonded to cinder block. Display cases are recessed in the walls, with radiators underneath. The ceiling is acoustic fissure tile and plaster. Inner doors of the lobby leading into the gymnasium are of satin-finish aluminum. Ticket offices were eliminated by the use of Dutch doors (with drop shelves) on both sides of the lobby.

An electrically powered door, operated with a keyswitch, divides the gymnasium into two class areas. Noise is not completely eliminated between the two areas, because there still is open space between door and roof.

Telescopic bleachers seat 1500 in the gymnasium. Two 16 foot portable bleacher sections can be moved from one end of the gymnasium to the other when necessary.

The public address system is more than adequate. It includes a 90 watt amplifier with four microphone inputs

Right: Women's state badminton championship contest was held in the new gymnasium. In addition to physical education classes, basketball, fencing and square dancing, the gymnasium is used for lectures, musicales and dances.



Left: Main floor plan of the University of Bridgeport's gymnasium. Considerable care was taken in planning the type and location of locker and shower facilities, faculty offices, and the many general gymnasium uses.

Right: Basement plan of the new gymnasium building. Here are located a classroom, varsity equipment room, coaches' locker and shower rooms, trainer's room, drying room, varsity and freshman locker rooms.



and one phonograph input, one low impedance microphone, a record player, two microphone outlets in the gymnasium, and four reflex horns with driver units mounted above the gymnasium floor on the steel beams. Switches control individual horns.

Four 4 by 8 foot bulletin boards in the gymnasium proper, plus four additional ones throughout the corridors, are used for publicizing various events and for the posting of visual aids related to the courses.

Inasmuch as basketball plays an important part in the collegiate athletic program, a regulation 50 by 94 foot court runs the length of the gymnasium, and a side court of 42 by 74 feet is provided on each side of the electrically powered door.

At the north end of the gymnasium is an area 25 by 110 feet for gymnastics, recreational weight lifting, badminton and shuffleboard. On the main part of the gymnasium floor are four badminton courts on each side of the dividing doors and three regulation volleyball courts.

The gymnasium locker room is 40 by 48 feet. There are eight triple-tier lockers (12 by 12 by 18 inches) in an assembly with a single-tier dressing locker (12 by 12 by 72 inches). There are 79 such units. The women's locker room has a similar arrangement except for a larger gymnasium-suit dressing locker.

The women's shower room has 18 individual showers and dressing stalls with partitions of polished pink Tennessee marble. The men's shower room is the "gang" type with 19 heads. Liquid soap is dispensed from soap reservoirs to each shower, thus eliminating the safety problem that comes with student use of cake soap.

Adjoining the women's locker room is a towel room (18 by 17 feet 9 inches) with a Dutch door. Towels and sports equipment are kept here. A similar room is in the men's area.

In memory of Dr. E. H. Arnold, founder of Arnold College, the alumni agreed in 1956 to raise \$7000 to equip an all-purpose room adjoining the north end of the gymnasium. Its dimensions are 22 by 46 feet. A folding door divides the room into equal sections, which permits two classes to be conducted in the room simultaneously. A small kitchenette, separated from the major area by another folding door, includes a refrigerator, stove, sink and adequate cupboard space.

A large mirror on the east wall is used in our modern dance classes, and on the west wall a glass, approximately 2 by 3 feet, permits a movie projector to be operated in the adjoining equipment room showing film on a screen in the Arnold Room. Square, social and modern dance classes and varsity fencing are conducted in this room. It also can be used for luncheons; on these occasions benches and tables are extended from the wall.

The equipment room, adjacent to the Arnold Room, is 20 by 23 feet. Volleyball standards, badminton standards, weights, gymnastic equipment, and the portable stage are stored there.

In the basement are a classroom, a varsity equipment room, coaches' locker and shower rooms, a trainer's room, drying room, rifle range, a varsity locker room, and a freshman locker room. In the equipment room is a laundry with equipment capable of washing and drying 100 pounds per hour. The drying room (12 by 38 feet) has two unit heaters with an

output of 55,000 Btu.'s at 2 pounds psig. for drying uniforms.

The building is heated by two boilers, each having 730 square feet of heating surface. These low-pressure boilers are set for maximum development of 5 pounds of steam. Offices and classrooms have fintube radiators. The basketball court is heated by two air units, and there are fintube radiators along the entire length of the outside walls. Warm air is supplied through ducts to the remainder of the building, the source being three air units fitted with steam coils. These units are capable of raising air from 30°F. to 130°F. with 5 pounds of steam. Pneumatic temperature controls regulate the heat.

The varsity locker room contains 175 lockers, 12 by 12 by 72 inches. Also, there is a small drying and shower room with seven heads. The freshman locker room contains 56 lockers of similar dimensions and five shower heads. Adjoining the two locker rooms is a room with four lavatories, six urinals, and seven toilets.

All varsity supplies and equipment are stored in a T-shape room of 1361 square feet. The main part of the room is used for equipment that is in current usage. One section of it is primarily devoted to laundering (two washers, one drier), while the other section is used for off-season supplies.

There is a training room 27 feet by 15 feet 6 inches with three training tables, several lamps, and a hydrotherapy whirlpool bath.

If we had it to do all over again, there is a change we might make. The floor of the gymnasium has an 8 foot wide strip of vinyl asbestos tile just inside of the lobby running across the width of the gymnasium to take traffic going and coming from the public restrooms, a feature that is highly satisfactory. The remainder of the floor is maple and is finished with four coats of gymnasium floor sealer. The gymnastics area at the north end is not overly large and is receiving a tremendous amount of use per square foot. This section is rapidly showing the wear as the casters of heavy gymnastic equipment are rolled over it. It apparently will require refinishing oftener than the remainder of the floor. In this respect, perhaps an error was made. If a resilient type of floor covering had been used in this area, the maintenance cost, including the cost of good appearance, could be kept considerably lower.



Left: One of four separate locker areas which provide facilities for all students taking part in the physical education program as well as athletes.

PROBABLY FEW FACTORS ARE MORE important to the welfare of an educational institution than good faculty morale. Unfortunately, this factor too often is taken for granted and faculty members are supposed to keep themselves happy and contented. It seems that many institutions are so busily engaged catering to students, alumni, trustees, and various pressure groups that they neglect the teachers.

In a recent report made to the North Central Association Board of Review by two examiners, the following statement was made concerning Northland College: "The faculty has an exceptionally high morale." No statement could possibly have pleased us so much. This statement was made in spite of the fact that at the time we were an unaccredited school and our salary scale was woefully low. Even with these lamentable conditions, we were fortunate in having an extremely able, alert and well trained faculty.

Faculty members are a highly intelligent group of people. Probably in few, if any, cross section of American professional groups are found persons with such high I.Q.'s, imagination, and aptitudes of service. They are real experts who should be used in every way possible in planning college development. Individuals of that ilk are in the same category as gifted students in school. Unless their work is challenging and purposeful they become bored, restless and disinterested. Therefore, it is necessary always to have positive goals toward which the faculty is striving. Examples of these are analyses of the curriculum, experimental programs in general education, evaluation of testing, and methods of improving instruction.

So often one of the chief bases for dissatisfaction among people is lack of communication. If faculty members are kept fully informed about the general college situation they are most considerate and sympathetic with problem areas. At Northland College we have found it advantageous to send all faculty members copies of the president's weekly letter to the board of trustees. In this letter are described such things as student achievements, faculty awards, and activities of the trustees. When the college is in difficult financial straits the faculty hears about it as quickly as do the trustees. By being so well informed concerning college affairs, the faculty is not inclined to make excessive demands.

Acquiring and retaining

Good Faculty Morale

GUS TURBEVILLE

President, Northland College, Ashland, Wis.

One of the happiest decisions made at Northland College was the decision to abolish all faculty rankings. Previously we had the usual quota of full professors, associates, assistants and instructors. It was our observation that these rankings were arbitrary, accomplished little that was good, and caused ceaseless bickering and jealousy. We do, of course, have salary differentials which are based on experience, teaching ability, and years of service. We have tenure, but obviously it cannot be based upon faculty rankings.

MANY DRIVEN FROM PROFESSION

In an era when the demand for college teachers is acute, it is regrettable that many teachers are being driven from the profession by harassment. Virtually all subject matter in the field of arts and sciences is controversial if full perspective is brought to bear upon the subject field. As old prejudices are pricked, resentment and fear will almost inevitably follow. Then come the telephone calls to the faculty member, department head, dean and president. If faculty members are criticized and made to feel insecure because of their sincere attempts to present all sides on all issues, they naturally will be resentful.

Economic rewards in themselves do not guarantee high faculty morale. In some institutions where the salary scales are high, faculty morale is low, and in other places where salaries are low, morale is high. Although there is no one-to-one relationship between high salary and job satisfaction, still it is imperative that all efforts be exerted to increase faculty salaries.

In terms of intelligence, amount of training, and prestige of the position, college professors should be in the same salary bracket as physicians and lawyers. This would mean that salaries for full-time faculty members after seven or eight years of service should range between \$15,000 and \$25,000 annually. Inasmuch as the highest salary in many small colleges is only a third of this minimum, a great deal of work must be done.

If faculty members are aware that the administration puts adequate salaries ahead of building programs and ahead of new educational gimmicks, morale will be improved. Faculty members are a long suffering group and will give of themselves enormously and selflessly if they feel that the administration is doing likewise.

We have found it important and helpful to bring faculty members and trustees together at periodic meetings. Having a chance to know each other and to share each other's problems has made each group more sympathetic with the point of view of the other. It is our belief that these get-togethers have made the trustees apply even more effort in attempting to raise funds to improve faculty salaries. The faculty, in turn, has been more desirous of doing nothing that would cause acute embarrassment, lack of interest, or hostility on the part of the trustees.

Obviously, there is no simple or sure procedure for guaranteeing good faculty morale. It takes a lot of honesty and courage on the part of both administration and faculty members. It can, however, be achieved, and the results are well worth the effort. #



**Continuing a series of
articles on the subject:**

Auditors Aid Administration

8-Accounting for Research Bulletins

A. E. MARIEN

Internal Auditing Division, University of Illinois

IN MAKING THE AUDIT OF THE SELF-supporting account of one of the research bureaus of a university, it seemed desirable to make a detailed accounting of the bureau's publications. The debits and credits to this small self-supporting account were concerned with some of the phases of the research bureau's program of bulletin distribution. The auditors asked the director of the bureau if they might make a complete accounting of its bulletins including, of course, physical counts of all such items on hand.

SPACE IS A PROBLEM

The director was especially interested in our doing this because of a space problem. In the crowded college building in which the bureau was located, a small room in another part of the building was being used to store reserve stocks of the bureau's research bulletins. The director hoped that the auditors would recommend how present stocks could be reduced. He hoped to be able to step up bulle-

tin production without requiring additional space.

Several phases of the research bureau's bulletin program were embraced by the self-supporting account being analyzed. Credits to the account consisted of receipts from single copy sales of bulletins, of contributions sent in for free bulletins, and of receipts from the bulk sale of bulletins. Prepared billings for quantity sales, the dollar amounts of which are usually large, are channeled through the central business office. Debits to the account consisted of the direct charges for printing and postage in relation to bulk orders, which are priced at cost and in relation to that percentage of bulletins which normally would be sold.

MOST BULLETINS ARE FREE

Of course, since the policy of the bureau was to distribute most of its bulletins free, as a part of the university's statewide research service, much of the direct cost of bulletin production is charged to the bureau's appropriation account. However, any excess-

sive balance accumulated in the self-supporting account because of credits more than offsetting debits is transferred to general university funds to compensate the university for indirect costs in bulletin production.

After the bureau administrator had accepted the importance of an accounting for all the bureau's publications, the auditors set up the following audit procedure for each bulletin.

1. The audit steps were verification of:
 1. The total number printed as evidenced by original invoice or record thereof.
 2. The number of bulletins distributed free.
 3. The number of bulletins sold.
 4. The total number on hand.
 5. Adjustment for unaccounted-for bulletins—missing copies for which no records for any type of distribution are found.
 6. Reconciliation of bulletins sold to cash receipts.

7. Comparison of the physical count of bulletins on hand with the bureau's record of on-hand items and also with the auditors' calculation of inventory as derived from subtracting the resultant figures of Steps 2 and 3 from the verified initial inventory of Step 1. The first and last inventory totals referred to are reconciled by Step 5 which, however, is a forced figure.

Step 4 involves the physical counting of all bulletins. The locations of the various stocks are to be determined first—for instance, the reserve stock may be in a different location from the "mailing room" stock.

BULLETINS IN THREE LOCATIONS

The auditors counted bulletins in three locations: the room separate from the bureau quarters, certain shelves within the bureau, and files of permanent copies in the bureau. In respect to the last named location, it is the policy of the bureau to retain 40 copies of each publication: 20 reference copies, 10 binding copies, and 10 reserve copies. The reserve copies are used to satisfy an emergency or urgent request when all other distributable copies have been mailed. After the seven steps of the audit procedure had been completed, the following conditions were revealed:

1. Inventory controls were inadequate; the shortage of bulletins was too high in comparison to the total inventory.
2. Quantities on hand for many of the older bulletins and for some of

the newer ones were too great. However, of approximately 100 titles, 33 of the older ones were no longer available because of the demand that had existed for them. Among the older bulletins with unreasonable quantities on hand were some titles of current interest.

Corrective suggestions made to the bureau management were:

1. The adoption of a new individual bulletin inventory form.
2. A closer approximation of probable demand for a bulletin before the original printing requisition is submitted.
3. Promotional programs for publications of current value, irrespective of their date of issuance.
4. Reduction (by one means or another) to reasonable quantities of slow moving or obsolete titles. For instance, an obsolete title might be valuable for free classroom distribution in studying the historical aspect of a certain principle of learning.

Suggestions 2, 3 and 4 were in reality nonfinancial aspects of the auditing problem. They were concerned, however, with the immediate interest of the administrator of the bureau—that of space. Also, a forward looking type of auditing service provides management with the operating as well as the financial facets of a problem.

It is often proposed that a bulletin distribution center for all publications on a college campus, including periodicals and course-of-study catalogs, is the most efficient type of operation. Such a center eliminates duplication costs and offers the advantages of controls made possible by centralizing stocking and mailing operations.

SEPARATE TWO ACTIVITIES

A separation, of course, of the money receiving activity from the bulletin distributing activity is important. This separation can be accomplished by means of separate divisions within the center or by the placement of money receiving for bulletins or periodicals (to the extent that such can be achieved) in the central business office. In the latter instance, many receipts invariably will be remitted to the place of distribution activity.

A factor that may prevent the carrying out of the proposal of a bulletin distribution center is the priority of educational and research objectives, of a more direct nature, on building space. #

**Six ways to organize
the controller's office
and to function as**

The Successful Controller

LOREN M. FURTADO

Assistant to the Controller, University of California, Berkeley

TO PERMIT THE CONTROLLER TO CONCENTRATE his attention on the over-all view of the organization, the operational duties related to accounting, budgeting and office management generally are delegated to a chief accountant and one or more other subordinate officers. The controller himself, in order to perform the higher level function accorded to him, must organize his office functionally and must organize his office effectively!

The modern concept of the function of controllership was developed by the Controllers Institute and promulgated in 1949. It comprises six elements, the principles of which are applicable alike to commercial and industrial organizations and to not-for-profit organizations:

1. *To assist in establishing, coordinating and maintaining, through authorized management, an integrated plan of operations.*

Planning the course of operations is necessary in order to make effective use of the total resources of the organization in accomplishing its ob-

jectives—in a university, the fulfillment of the educational program. Planning encompasses the use of all available tools, accounting, budgeting, forecasting, statistics and so forth. Through the effective use of such tools, a plan designed to accomplish the objectives of the organization over a stated period of time may be constructed.

This plan or budget is not prepared by the controller. Although he may have to explain, urge, guide and sell line management on acceptance of the planning principle, he does not prepare the over-all plan. It must be prepared through the coordinated efforts of line executives who must accept responsibility for performance. This is the important point: The plan or budget is prepared through *authorized management*; otherwise, it could not gain the general acceptance by line management necessary to its fulfillment.

After the directors of the organization have approved a budget for control of operations, the controller must not only design and place into

operation the necessary procedures to ensure that the budget may be carried out, but he must ensure that unauthorized deviations from the approved budget are not permitted.

In a large university, such as the University of California, long-term planning is carried out by the regents' committee on educational policy, the several officers of the regents, and by the committees on educational policy of the academic senate. Such essentially long-range planning is related to the annual budget making process within the financial resources of the institution.

The estimate of income of the various sources of funds is prepared by the controller. After scheduled hearings of the detailed local campus requests have taken place, tentative allocations of funds, or budget target figures, are established by the president for each campus or statewide budget making unit under his jurisdiction, within the estimate of income to be available.

Requests prepared by the local campus budget units, usually the departments, are developed on the following bases: (a) funds required for maintenance of the present educational program; (b) funds requested for improvements in the present program; (c) funds requested for new programs—in order of priority.

HOLD SERIES OF MEETINGS

After the targets for the budget year have been established and the budgets are brought into alignment within the total of resources available, a series of hearings are held before the regents' committee on finance. This committee may call upon the controller for comparative analyses, not only of the local campus budget requests but also for comparisons with programs of other major institutions, particularly in the area of educational and general expense. Upon completion of the hearings before the committee on finance and upon effecting whatever further adjustments may be directed, the budget request, or operating plan, is presented to the board of regents of the university for approval. Thus, the plan for control of operations of a not-for-profit organization comes into being, provided the state legislature appropriates the necessary funds.

2. To measure performance against approved operation plans and standards and to report and interpret the

results of operations to all levels of management. This function includes the design, installation and maintenance of accounting and cost systems and records, the determination of accounting policy, and the compilation of statistical records as required.

Measuring, reporting and interpreting involve the use of accounting data, cost data, and often statistical data obtained from accounting records as by-product information. The traditional routine statements, such as statements of income and expense and the periodic balance sheet, cannot be relied upon to provide all of the up-to-date financial data needed by management to make intelligent operating decisions.

COMMON COMPLAINT

A common complaint of management is that accountants, and controllers too, submit too many detailed historic reports, as compared with short analytical reports highlighting areas where corrective action must be taken. Accountants as a rule tend to be perfectionists, and this tendency must be overcome in favor of their making objective judgments.

Management would much rather have approximate data that is timely than accurate, precise data that is too old to be of value. Many reports also are too full of minor and perhaps insignificant data often in need of condensation and refinement. Many a complete comprehensive statement has been presented after the parade has passed down the street!

The responsibility of the controller is not fulfilled by rendering a financial statement; it is not fulfilled until management understands the facts. Interpretation of financial statements must be thoroughly objective and honest. The right to interpret is an opportunity for accountants to make an important contribution to management thinking.

A primary objective of the controller for the regents of the University of California is to measure performance against the operating plan or budget. When a department incurs expenses in excess of its budget, a factual analysis is made and the matter is reported by the campus accounting officer concerned to the department chairman. If the chairman is unable to rectify the situation, a complete report of the facts involved is made to the chief campus administrative officer, whose responsibility

it becomes to obtain adjustment of the overdraft by whatever means are appropriate.

It is seldom necessary to take final recourse through reports to the president or to the regents. When these steps have been taken, the controller has performed his responsibility in accord with the controllership function. Although he may indicate the action considered to be necessary, he does not make operating decisions except for his own office.

The operating budgets were established upon the recommendations of department chairmen to the campus administrative officers and approved by the president and the regents. The controller measured performance against the approved budget and objectively reported unauthorized deviations from the plan to line management for corrective action. In a not-for-profit organization such as the university, unauthorized deviations from the budget cannot be permitted, because each departmental unit must be assured of its fair share of the financial resources available for operations during the fiscal year.

CONTROLLER REPORTS TO REGENTS

In like manner, the controller reports quarterly to the regents (including the president, who is a regent) on performance against the over-all operating budget of the university. This involves also a forecast of estimated balances expected to be realized by June 30, the end of the fiscal year, which are reported for whatever disposition the regents might wish to make.

In addition to this report on financial condition of the university, the controller renders to the regents, quarterly, several special reports, including a statistical report on employment and overtime, a report on activities under contracts with federal agencies, a report on the building program, and a report on the utilization of student loan funds. Nonrecurrent, special reports are submitted to the regents whenever the facts of a situation require the controller to fulfill his responsibilities for complete reporting on financial matters.

Reports to operating management are prepared regularly by local campus offices of the controller for all auxiliary and service enterprises and for special projects, when it is considered advisable to report and interpret financial developments. It is incumbent upon

the controller to report factually and objectively but not to assume responsibility for operations.

3. *To measure and report on the validity of the objectives of the business, and on the effectiveness of its policies, organizational structure and procedures in attaining those objectives.* This includes consulting with all segments of management responsible for policy or action concerning any phase of the operation of the business as it relates to the performance of this function.

SHOULD TAKE OBJECTIVE VIEW

In addition to the president and other major officers of an organization, the controller, because of the nature of his work, has the opportunity to see the broad over-all picture of the organization. Since he frequently has no management responsibility, he should be able to take an objective view of the operations of the entire organization. He must have sufficient freedom from operating responsibilities within his own office to be able to devote a good part of his time to study of the long-term implications of accepted policies as well as proposed programs. Further, he should be sufficiently free to devote time to the study of the effectiveness of the organizational structure, not only of his own offices but of the entire organization.

The controller must be alert to point out the need for organizational changes where operational problems have resulted from a "hazy" organization structure and should be prepared to point out the need for changes in the by-laws or standing orders of the corporation whenever changed conditions have rendered old rules and requirements inoperable.

4. *To report to government agencies, as required, and to supervise all matters relating to taxes.*

All college and university business officers are acutely aware of the many problems involved in meeting reporting requirements of separate government agencies. In this area little can be done by individual institutions to bring about simplification or more uniformity in reporting requirements.

The following are some of the agencies to which reports are submitted by the office of the controller at the University of California: U.S. Atomic Energy Commission; U.S. Office of Education; U.S. Department of Health, Education and Welfare; U.S. Department

of Agriculture; U.S. Department of Commerce; U.S. Treasury Department, and U.S. General Accounting Office.

Supervision of tax matters is also a function of the controller's office. Publicly controlled universities do not have many tax problems, as they partake of the tax exemption accorded the state under law. The major concern in such institutions is accounting for federal withholding taxes from salaries and wages and the withholding tax laws as they affect earnings of aliens. As supervision of tax matters and the attendant relationships with the federal government are among the traditional functions of the chief accountant, they generally are better understood than the newer concepts of the function of controllership.

5. *To interpret and report on the effect of external influences on the attainment of institutional objectives.* This function includes the continuous appraisal of economic and social forces and of governmental influences as they affect operations.

FUNCTION OF CONTROLLERSHIP

One or more of the top executives of a college or university must devote his energies to appraisal of economic and social trends if the institution is to meet the challenges of a rapidly changing world and attain its educational objective. It is usually a function of controllership, because the implications of social and economic changes inevitably involve financial problems. For example, a commonplace problem such as determining whether to change a system of inventory valuation involves serious study of economic trends.

This function also involves appraisal of governmental influences on the organization. At the University of California, many of the great research activities now carried on are made possible through contracts with federal agencies. Determination of educational policy has been affected by the outpouring of federal monies. Financial officers devote a great part of their time to the many complexities of federal contract activities and their effect on the educational and financial policies of their institutions.

6. *To provide protection for the assets of the organization.* This includes establishing and maintaining adequate internal control and auditing.

From the standpoint of controllership, establishment of controls to pro-

tect the assets of the institution is a return to the well beaten path. It is a traditional function of the controller to establish the internal controls so important to protection of the assets of the organization. In more recent years, internal auditing has been considered as an arm of the controller, although in some not-for-profit organizations the internal auditor may be responsible to the president or perhaps even to the governing board.

An internal postaudit program was established two years ago at the University of California and is now functioning on a statewide basis. The internal auditor, a C.P.A., is responsible to the controller. The program of internal audit has been designed to complement, rather than to duplicate, that of the independent outside auditors.

EFFECTIVE AID TO MANAGEMENT

In large organizations, internal audit provides an effective aid to management in checking for compliance with policy directives, adequacy of internal controls, and effectiveness of established procedures. Internal audit renders an important service as well to operating personnel. It assists operating personnel to understand better the reasons for control procedures and gives it assurance of integrity in the performance of its fiscal responsibilities.

In brief, for a controller to be successful in carrying out his responsibilities, he must have a management view of the organization and must be capable of working effectively with all levels of management. He must be able to convince line management of the need for planning, and he must be of service to those who make the operating decisions, without assuming operating responsibilities. Furthermore, he should report consistently and objectively on performance in relation to the operating plan until management understands the facts, and he must be capable of getting action when action is needed.

A broad liberal education appears to provide the best preparation for the responsibilities of controllership and a thorough, practical knowledge of accounting theory and practice is required. In addition, a prospective controller should cultivate a high degree of recognition of his responsibility for rendering service, for upon this quality will depend to a large extent his ability to gain acceptance and to broaden the controllership function. #

Our goal was to have

GOOD ICE

JOHN F. BRUSH

*Superintendent of Grounds and Buildings
Bowdoin College, Brunswick, Maine*



Ice conditioner

IF ICE HOCKEY WERE TO SURVIVE AT Bowdoin (a college of 800 students), the ultimate answer seemed to lie in planning an indoor arena where a full program of daily practice, an uninterrupted game schedule, adequate periods of free skating, and a varied program of public skating could be maintained, unaffected by the unpredictable and shifting elements that make up winter weather near the Maine coast.

Our goal was to have *good ice*, available throughout the skating season.

The college architects were called upon to design an arena type of building that would blend into our long-range scheme of campus development and that would nestle among the historic pines of Bowdoin. The architects produced superb renderings of such a building, and these were reproduced and used in fund raising ventures among alumni and friends. During two seasons of hopeful endeavor pledges mounted steadily, and the long awaited day arrived when a building committee was appointed and final planning began.

The contractor who had built several fine buildings for the college was sufficiently well acquainted with our desired standards and could be relied upon to engineer a structure of this type. Acting as our agent and builder, he called in the architects, McKim, Mead & White of New York, for consultant service when needed. This mostly involved matters of building orientation and selection of exterior trim colors. This was the working basis from which our arena developed.

A poured foundation, side walls of painted concrete block, end walls of frame with stained siding, and a

curved bowstring truss-supported plank roof were selected. Fire insurance underwriters advised the use of steel trusses, yet several rink operators warned of the problem of excess condensation and resulting drip that would hamper our goal of having *good ice*. Heeding this warning, wooden trusses were obtained, pre-assembled on the job, and then hoisted into place. Tongue-and-groove plank was fitted to the curvature of the trusses. Steel angle bracing was used to guy the steel columns supporting the ends of the trusses. These braces also are the basic supporting structure for the bleachers, which seat 2500. The bleachers are of steel-reinforced concrete applied to preformed roof decking, with plank seats.

REFRIGERATION SYSTEM

Several reputable refrigeration firms bid on the essential "heart and arteries" of the arena. Based upon favorable reports from Middlebury and Colby regarding service policy, we selected the same firm they employed to provide the entire refrigeration installation. We were reluctant to consider bids from oil burner and air conditioning firms, presuming that by dealing with an established refrigeration firm we would eliminate subcontracts and accessory dealers and thus streamline the avenues for future service and parts replacements. A first-class ice machine installation seemed of prime importance in attaining our goal of having *good ice*.

We were advised that on sandy soil the use of impacted gravel with several graded layers of fine sand and tar would provide adequate insulation and save the cost of 17,000 square feet of special underlayment. Recent reports

from other colleges leave the wisdom of this advice open to question, for those having underlayment insulation are certain that their operating costs are sizably reduced thereby.

Much can be said in favor of both wrought iron and steel piping. The initial cost differential and the relative life expectancy led us to the selection of steel. Opinion remains divided on this, and time alone will validate the wisdom of our decision.

Anticipating possible off-season use of the arena, a 1½ inch macadam topping was applied over the piping. This was spaced 4 inches on centers, with groun raked level with the tops of the pipes. Such a surface will permit lightweight indoor activities to be scheduled without damage to the 11 miles of cooling coils that make up the freezing surface. Removable dasher boards at one end will further aid this dual use.

The cost of transporting secondary power and the inevitable line drop under starting loads made the decision to have a primary transformer vault within the building a "must" if we were to have *good ice*. Two 50 h.p. compressor motors, two 15 h.p. circulating pump motors, and several auxiliaries added to the lighting demands of an 85 by 200 ice surface amounts to quite a line load. Three 50 kva. transformers provide ample power to meet this demand.

Opinion was divided regarding the choice of a light transmitting window wall. Although the insulating value of glass block was clearly recognized, the ready replacement feature of sheets of translucent plastic panels bolted into place and their relatively lower initial cost won this decision. Under certain conditions of humidity, how-

ever, excessive condensation occurs, and we are inclined to agree that this might not occur with glass block. Further experiments with ventilation and heat control might ease this condition in the coming season.

Omitting the expense of a melting pit and investing in an ice conditioner was one of our most rewarding decisions in the entire project. In lieu of a vehicle to tow an ice planer, followed by a snow scoop and assisted by a crew of snow scrapers and water cart operators, a piece of equipment mounted on a four-wheel drive jeep chassis scrapes, lifts, waters and mops all in one operation. It requires only a driver and someone to remove and replace the goals. This permits complete conditioning after practice as well as between game periods and does not require the complicated "stand-by" scheduling of an ice conditioning crew. We regard the purchase of this machine as a fast amortizing investment and, in view of its versatility, consider it essential in having *good ice*.

After providing liberally for student practice, games and periods of free skating, we are able to schedule public skating almost daily during the entire season. This has served well as a public relations gesture, being in accord with the over-all college policy of sharing its facilities with the local community wherever possible, after fulfilling the arena's primary mission. The public is charged a nominal skating admission to help defray the added operating expenses. Season tickets are sold also.

Any attempt to isolate specific operating costs in meaningful units after our first season might be misleading. It is better to await a more "normal" year for such an evaluation. Destruction by fire of near-by St. Dom's Arena in Lewiston diverted a number of skating clubs and special groups to our arena in excess of a normal gate. On the other hand, we opened late last fall with incompletely landscaped and inadequate parking facilities. This precluded our advertising public skating, which would draw an even larger gate.

A part of last season's scheduled use went to the U.S. National Hockey Team, originally scheduled for St. Dom's. These players, along with all others who have skated in the arena, have wholeheartedly endorsed the successful attainment of our initial goal: to have *good ice* at Bowdoin. #



Above: Wooden trusses, pre-assembled on the job, were hoisted into place. Steel angle braces serve as guys for the steel columns supporting the trusses. These braces, in addition, serve as the supporting structure for the bleachers.



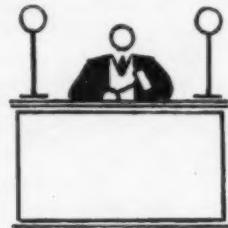
Above: Grout, raked level with the top of pipes, offered protection for the heavy equipment to be used in applying a macadam surface. Below: Bowdoin arena, after ice conditioning. Entrance doors and snack bar are in background.



Can a Corporation Practice Medicine?

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ONE OF THE MOST SIGNIFICANT DEVELOPMENTS in the healing arts during the past decade is the growth of group practice. An increasing number of physicians and surgeons are finding it possible to render more effective service to their patients by the establishment of clinics whereby the patient has the benefit of the close association of many specialists and more costly and effective diagnostic equipment.

Some university schools of medicine have established large-scale clinics, staffed with full-time faculty members and with the professional fees therefrom collected and retained by the university itself. All university schools of medicine and dentistry operate teaching clinics. Do such activities constitute the corporate practice of medicine and dentistry, contrary to state law?

BASIS FOR DECISIONS

The majority, though not all, of the decisions on the subject hold that a corporation may not engage in the practice of medicine, surgery or dentistry by the employment of licensed physicians, surgeons and dentists. The basis for these decisions has been well stated by an Illinois court¹ as follows:

"A corporation can have neither honesty nor conscience, and its loyalty must, in the very nature of its being, be yielded to its managing officers, its directors, and its stockholders. Its employees must owe their first allegiance to their corporate employer, and cannot give the patient better than a secondary or divided loyalty."

This position and reasoning of the Illinois court has been followed by the courts of Nebraska,² New York,³

¹Dr. Allison, Dentist v. Allison, 196 N.E. 799 (1935).

²State Electro-Medical Institute v. State, 103 N.W. 1078 (1905).

³People v. John W. Woodbury Dermatological Institute, 85 N.E. 697.

California,⁴ Pennsylvania,⁵ Michigan,⁶ Iowa,⁷ Colorado⁸ and Kansas.⁹ On the other hand, a Missouri court¹⁰ specifically has upheld the legality of the corporate practice of medicine.

EXCERPT FROM OPINION

The following is an excerpt from the opinion of the court:

"In all the larger cities, and connected with most of the medical colleges in the country, are hospitals, maintained by private corporations, incorporated for the purpose of furnishing medical and surgical treatment to the sick and wounded. These corporations do not practice medicine, but they receive patients and employ physicians and surgeons to give them treatment. No one has ever charged that these corporations were practicing medicine. The respondent corporation was chartered to do, in the main, what these hospitals are doing every day—that is, contracting with persons for medical treatment and contracting with physicians to furnish treatment—and the fact that Dr. W. A. Lewin is the principal stockholder and manager of respondent corporation, and is employed by it to furnish medical and surgical treatments to the patients who may contract with it for such treatments, does not alter the legal status of the corporation, or show that it has violated the terms of its charter."

⁴Pacific Employers Insurance Co. v. Carpenter, 52 P. 2d. 992 (1935).

⁵In re Thomas Diagnostic Clinic, 30 Pa. Dist. R. 778 (1921).

⁶People v. Carroll, 264 N.W. 861 (1936).

⁷State v. Bailey Dental Co. 234 N.W. 260 (1931).

⁸State Dental Examiners v. Savele, 8 P. 2d. 693, 287 U.S. 562 (1932).

⁹Winslow v. Kansas State Dental Examiners, 223 P. 308 (1924).

¹⁰King v. Phoenix Insurance Co., 92 S.W. 892 (1906).

The courts of Nebraska,¹¹ Oregon¹² and Washington¹³ have expressed similar views. In 1957 the supreme court of Iowa¹⁴ was compelled to reconsider its former position in this matter. In 1952, Frank Christensen entered a clinic owned and operated by the Des Moines Still College of Osteopathy and Surgery. He was assigned to a senior student, Beverly L. McCaleb, for examination and treatment. According to Mr. Christensen's testimony, he fainted from pain as a result of the treatment given him by the student, and, later, it was found that he had a ruptured disk. Several doctors testified that, in their opinion, the manipulation and treatment he received at the Still Clinic probably precipitated the condition.

COLLEGE NOT LIABLE

In the litigation for damages, the college contended that, as a corporation, it could not, under Iowa law, practice the profession of medicine. It could, therefore, not have had authoritative control of licensed physicians performing professional tasks directly or indirectly. Since it could not, under Iowa law, exercise control over its faculty members in the practice of their profession of medicine, it could not be held liable for their failure to supervise the work of their students in the practice of medicine. In other words, the patient could recover only from the faculty member or from the student, not from the corporation, since it could not engage in the practice of medicine.

The Iowa court was compelled to concede the fact that no one in Iowa

¹¹State Electro-Medical Institute v. Platner, 103 N.W. 1079 (1905).

¹²State ex rel Bloom v. Medical Examiners, 188 P. 960 (1920).

¹³State v. Brown, 79 P. 635 (1905).

¹⁴Christensen v. Des Moines Still College of Osteopathy and Surgery, 82 N.W. 2d. 74 (1957).

may practice the healing arts unless licensed to do so and that a corporation cannot be thus licensed; that an unlicensed corporation cannot be given control of licensees in the performance of their professional tasks, directly or indirectly. However, Justice Larson, in the opinion of the court, points out that ". . . we are here faced with a new and somewhat different proposition. From a careful search of the cases, it is new elsewhere as well. . . . Obviously, such a clinic and hospital is a necessary adjunct to the school, and

its operation and such undertakings to the public are sanctioned under the law. . . . The operators of the school and clinic are required to and do place over the students supervisors and instructors who are expected to give reasonable supervision and guidance to the students undertaking to perform the acts otherwise known as professional services for any patient who submits to the school for clinical practice. . . . We are satisfied that there was substantial evidence: (1) of the assumption of a legal duty by the college;

(2) of the agency relationship of the student and the college; (3) of the negligence of the student to use due care in the performance of his required service, and (4) of the failure of the college, through him, to render the treatment and care required."

Thus, the court attempts to arrive at what it considers a just and equitable result, so far as the patient is concerned, without answering the basic question: Was the college engaged in the corporate practice of medicine, as this is usually defined? #

Money Raising and the Business Officer

E. W. MARTIN

Treasurer, Hendrix College, Conway, Ark.

THE BUSINESS OFFICER CAN MAKE significant contributions to fund raising through his efforts in four fields. He can help maintain good public relations, assist in formal campaigns, take part in the continuous search for current contributions to budget support, and endeavor to lead his friends to make provisions in their wills for the institution.

If the cause is worthy, good public relations constitutes probably the most significant factor toward the business officer's success in fund raising. He renders significant service in this field by the execution of his usual duties with courtesy, kindness and consideration for those with whom he deals. Thus, the business officer is contributing toward the success of his college's fund raising from the day he enters upon his duties until the time of his retirement.

Maintaining good will through all the trials and tribulations of the business office is difficult. However, dealing honestly and fairly and saying "no" with a smile will help people realize that the business officer's every action is what he believes to be for the best interests of the institution, within

the range of his authority and discretion.

One problem often met by the business officer is that of explaining to a local merchant why he sometimes must buy supplies or equipment at a distance from the town in which the college is located because of a sizable savings in cost.

EXPLAINS BUDGETING PROBLEM

A local friend of the college called upon the college business officer and complained that the college was buying too much equipment and too many supplies out of town. The business officer gave the "friend" a courteous hearing and then outlined in detail the budgetary problems of the college. They discussed the college payroll and its value to the community and to local business. They compared the amount of the local buying power made possible by this payroll, with the total amount of college purchases of the type that had been criticized. The friend finally agreed that the business officer should make his purchases at the best possible price and value, and that it was his duty so to handle the finances of the college as to maintain its solvency, in order that it might continue its payroll and its many other services and advantages to the community.

From a paper presented at the meeting of the Central Association of College and University Business Officers, Houston, Tex., 1957.

When a formal campaign for funds is undertaken, the business officer's acquaintance with his constituency enables him to be of great help in preparing prospect lists. He not only knows the persons but has considerable knowledge of their ability to pay and of the attitude of individuals. When pledges are obtained, they may be handed over to the business office for collection. If so, the business officer will not try to discharge his duties by printing notification blanks, typing in the dates and amounts due, and mailing them out as a finance company sends notices of automobile installment payments due. Rather, a pledge of an amount to be paid in the future should be considered as a declaration of intention and, to the business official, as an opportunity to resolicit that amount. This should be done by personal letter, individually typed. A form letter lacks the personal touch, although form paragraphs sometimes may be used.

In addition to formal campaigns, the business manager should maintain a continuous program of cultivation of friends. He knows the needs of the institution in terms of new buildings, expanded program, and additional payroll, and he is able to talk specifically and authoritatively in terms of dollars. He should never let pass an

opportunity to tell a sympathetic friend of the financial needs of the institution. Then, if the friend expresses a wish to contribute, he should arrange for him to do so with the least inconvenience to himself.

A citizen sometimes authorizes his bank to pay each month a draft drawn on his account by his church, civic club, chamber of commerce, or the savings and loan association in which he has a savings account. A number of years ago, it occurred to our college staff that the same system might be used in the collection of monthly contributions to our Living Endowment Fund. Accordingly, we prepared some draft authorization blanks which we have used with satisfactory results.

About five years ago, I visited in his office a friend upon whom we have drawn a draft each month since March 1940. I had called to thank him for his support. He and I were discussing the program and the needs of the college, and he said that he would like to make a change in his Living Endowment payments. Whereas he had been paying \$10 a month for a number of years, he wished to increase his contribution to \$15 per month, he said. As soon as I returned to my office, I prepared a new authorization upon his bank and mailed it to him for his signature. Thus, without inconvenience or attention to detail on his part, he has made a contribution each month for 17 years. However, we keep him constantly reminded of our appreciation of his support.

Finally, there are great fund raising possibilities, over the longer term, in a bequest program. If an institution has a formal program under way, the business officer should cooperate in it. If not, he can work informally among his friends with, of course, the knowledge and approval of (and in many cases the assistance of) the president.

Among the constituency of an institution are many successful men who

have great confidence in the business officer. Some of them are close personal friends of his. Some of these friends have no children; another may have children who are very successful and for whom he has made ample provision. Such a person may have no plans for, or real need of, his remaining estate beyond his lifetime and that of his wife. Whenever opportunity is afforded, the business officer should discuss the needs of the college with such a friend and suggest to him that he study the possibility of mentioning the institution in his will.

MANY WILLS OUT OF DATE

Surprising, indeed, is the number of persons who either have no will or have one that is out of date. Any man with considerable property should have a will, and he should keep this will up to date by consulting his attorney whenever there occurs a change of status in his family or in his business, or in any event at five-year intervals.

Before the business manager discusses wills with his friends, he should check with the attorney as to the importance of carefully prepared and up-to-date wills in that jurisdiction. Failure to have a will usually is due to oversight or to the quite human tendency to defer action upon matters that do not seem to require immediate attention.

Failure to revise a will is sometimes due to the belief that a well prepared will is good for life. Knowing these two needs and mentioning one or both to a friend may start a discussion that will give the business manager an opportunity to suggest a bequest to the institution. Even if such a suggestion is not put in words, it may bring the college into this man's thinking if, and when, he has a will written or revised.

I usually remind a friend that, in building his estate, he has developed

and demonstrated business judgment especially effective in relation to his specific properties. I suggest that he will wish to give the same serious attention to the disposition of his estate, and that, by careful planning, he can pass the benefit of his judgment, along with his properties, to those for whom he wishes to provide. In order to plan wisely, I suggest that he ask himself these questions: Has my attorney checked my will recently? If I have no will, would the law give my wife the portion of my estate that I assume she would receive? Do I have a current inventory of my property and of my debts? For whom do I wish to provide, and what provision should I make for each? What assets would I have available for these purposes?

We also emphasize three basic possibilities: (1) The relative needs of individuals may change and justify reapportionment of aid among them; (2) emergencies occur, so it may be best not to freeze all assets assigned to the specific objectives; (3) to build or improve a beneficiary's earning power may prove to be of greater help than merely to provide money or other property. Our college has incorporated these and other questions and reminders in our "Work Sheet for Planning Your Estate" for distribution among our friends.

I may suggest to a friend who has few close relatives—for example, a wife only—that his will might contain a provision that, in event he survives his beneficiary or beneficiaries, his estate or part thereof go to our institution.

There are many possibilities in such discussions. There are several good books on estate planning, any one of which the college business officer will find interesting reading. As he reads more and learns more, he may decide that this would make an interesting hobby. If so, such a hobby could be of great value to his college. #

Housing Married Students

... is a problem faced not only by administrators of large colleges and universities. In the January issue David H. Parsons Jr. of Guilford College in North Carolina will report on the new housing facility for married students at this small Quaker institution.

Many college buying officers agree: "When budget is a factor, choose the trim, comfortable shaped-seat line of Steelcase chairs"



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NEWS

Military Research Grant Refused . . . Tennessee College Lowers Segregation Bars . . . Five-Man Jury Will Try Accused Faculty . . . Thousand Students Get First Massachusetts Loans . . . Retiring Professors Get Placement Aid

Haverford College Refuses Military Research Grant

PHILADELPHIA.—The board of managers of Haverford College has decided that the college will not accept Department of Defense grants for research projects. The decision was made in the belief that such grants constitute a "threat to free academic inquiry in America" and are inconsistent with the pacifist principles of the Society of Friends.

Action by the board settled an issue that had been a lively topic of campus discussion since January, when, according to newspaper reports, three faculty members had received permission to apply to the Department of Defense for research grants.

Even though the research would have been nonmilitary, many within the institution questioned whether it was consistent for a Friends' institution to seek funds from the military agency of the government. The college, they pointed out, would be directly involved, since it would be responsible for the administration of such grants.

At the same time, the board took action to encourage nonmilitary research on the campus by establishing a special fund for such use, with an additional appropriation of \$10,000. This fund underscores the college's concern "about the abnormal control which the Department of Defense can now exercise over American education through its large and attractive resources."

Rutgers Faculty to Be "Tried by Jury"

NEW BRUNSWICK, N.J.—Under a new procedure adopted by the State University of New Jersey's board of governors, Rutgers University faculty members, if brought up on charges relative to academic tenure and free-

dom, will be given a hearing before a "jury" of their fellows. The procedures have been formulated by a special committee of the board of governors headed by Judge John O. Bigelow of Newark, in consultation with a faculty committee.

A five-member panel chosen by lot from the university senate will hear specific charges against faculty members and will submit its report to the board of governors.

The new procedure for handling cases involving academic tenure supersedes earlier university regulations. It is designed to provide the "due process" that the various organizations of professors have urged to be followed in such cases and that the U.S. and New Jersey supreme courts have insisted upon, where teachers have been dismissed from public institutions because of invocation of the Fifth Amendment.

N.Y.U. Gives Placement Aid to Retiring Faculty

NEW YORK.—Under the direction of the office of placement services of New York University, a new program has been established for retired faculty members. Purpose of the program is to counsel retired faculty members and provide information on jobs and research opportunities.

The N.Y.U. retirement age for faculty and staff is 65. However, professors reaching 63 may go on a half-time schedule for four years until they reach 67 or continue full time and retire at 65.

Dr. Alonso F. Myers, director of the university's Retirement Counseling Center, reports on a recent survey of 107 professors who had retired in the last 10 years. After the 107 had retired, 52 per cent obtained employment. Of these, 63 per cent were working in full-time jobs and 28 per cent had accepted teaching positions.

Tennessee Has New Desegregation Program

NASHVILLE, TENN.—Recent action of the Tennessee Board of Education permits admission of "all qualified applicants" at state supported colleges beginning next fall. But it gave individual institutions authority to limit enrollments. The board action apparently paved the way for lowering of all segregation bars at colleges under its jurisdiction.

The selective device recommended by the board would apply to all prospective students in individual institutions. Only when limited building facilities, finances or other reasonable circumstances as determined by the college administration make it difficult to accommodate additional students may any devices be established. The selective devices must be approved by the board.

The recently adopted policy will replace an earlier desegregation program which was thrown out by the U.S. Supreme Court. The earlier program called for gradual integration over a five-year period.

Finds ETV Important But Not Cure-All

ONEONTA, N.Y.—"Instructional television is an area worth looking into but it is not going to solve all of our problems," declared Dr. Carl J. Freudenerich at the fourth annual School-College Articulation Conference held recently at Hartwick College in this city.

Citing research indicating that the average comprehension of material taught by television to a number of classrooms simultaneously is somewhat better than the average comprehension of the same material taught in person, Dr. Freudenerich cautioned that it is the extremely brilliant student, who would normally do extra reading on



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522 FIFTH AVENUE

Vol. 23, No. 6, December 1957

NEW YORK 36, N. Y.

his own, and the extremely poor student, who is attracted by the novelty of the method, who do better.

Admitting that teaching methods in language are highly controversial, Dr. Freudenrich went on to summarize findings in various areas.

"Changing attitudes and tastes is possible in the school," he stated. "The use of the mass media of radio, television and newspapers is especially effective with students who will not continue their education beyond high school. In this area commercial facilities are more effective than education.

"Speed of reading does not necessarily increase comprehension. Comprehension must be taught along with speed and must be tailored to the material being taught.

"The teaching of writing, reading and speaking skills must take place in every class, not just English classes, to be effective," he concluded.

Five Colleges Form Own Credit Unions

MADISON, WIS.—Faculty and staff members at five colleges and universities formed their own credit unions in recent months, the Credit Union National Association reports. There are now well over 1000 credit unions serving teachers and school employes. About 200 of these are for college and university personnel. The new groups are at Arkansas State College, Jonesboro; California Baptist College, Riverside; Stanford Research Institute, Menlo, Calif.; Stetson University, DeLand, Fla., and the University of Chicago.

Thousand Students Get State Guaranteed Loans

BOSTON.—A thousand Massachusetts college students have borrowed \$452,925 in the first seven months of a state guaranteed loan system, according to a recent report by the Massachusetts Higher Education Assistance Corporation. These students attend 169 colleges in the United States and in Europe.

The Massachusetts Higher Education Assistance Corporation, a lending agency, was established last year by the state legislature. The corporation builds its reserves through contributions from business, charitable trusts, and individuals.

Ask for More Science, Mathematics Courses

WASHINGTON, D.C.—At a recent meeting of 125 educators and government experts summoned by the Department of Labor, Marion B. Folsom, Secretary of Health, Education and Welfare, stated that higher priorities must be given to mathematics and science courses in the light of the recent report showing the United States to be far behind the Soviet Union in these fields.

James P. Mitchell, Secretary of Labor, stated that it was imperative to set up a counseling system for channelling school youths into occupations that must be manned if the country is to survive.

Fraternity Secedes in Discrimination Protest

NEW YORK.—The Columbia University chapter of Theta Tau, professional engineering fraternity, has severed its membership in the national organization in protest against discrimination against nonwhites, according to newspaper reports.

John Adams, regent of the local chapter, announced recently that the

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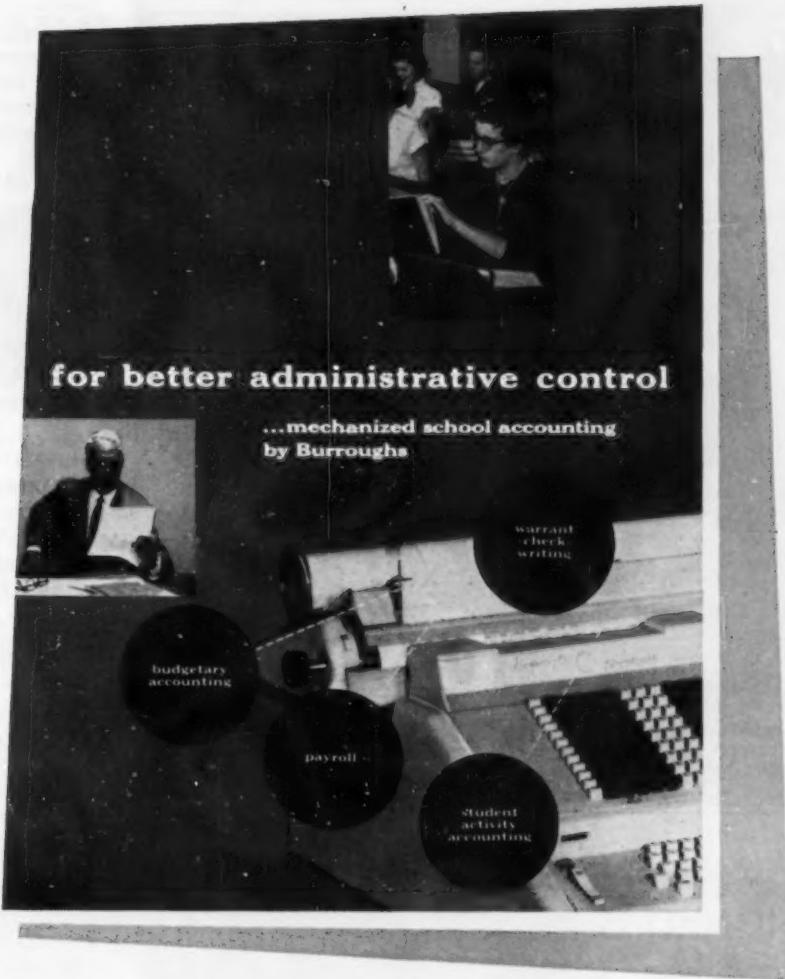
To reduce the size of the spot of ordinary spotlights, you must mask out, or iris down, part of the light beam, thus wasting much of the available light for which you are paying. The resultant spot is furthermore usually fuzzy-edged and irregularly shaped. With the single control, two-element variable focal length objective lens system of Strong Spotlights, the brilliance of the spot actually increases as it is reduced in size, and is sharp-edged from head to floor.

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members have voted to form their own fraternity within the Columbia School of Engineering as a result of a refusal by the national fraternity to remove a constitutional clause that limits its membership to "males of white birth."

NAMES IN THE NEWS



Clark Kerr

Clark Kerr, chancellor of the University of California, Berkeley, was unanimously elected to succeed Robert Gordon Sproul as university president, effective July 1. Dr. Kerr will have a statewide responsibility for the various campuses of the University of California.

Henry Klein, for the last five years vice president of the fund raising firm of John F. Rich Company, Philadelphia, has been named as director of development and public relations at Harcum Junior College, Bryn Mawr, Pa.

Charles T. Thrift Jr., vice president of Florida Southern College, Lakeland, since 1946, has been named acting president of the college. He succeeds Ludd M. Spivey, who retired in October after serving 32 years as president. Dr. Thrift went to Florida Southern College in 1940 as a professor of religion.

John A. Hannah, president of Michigan State University, the Rev. Theodore M. Hesburgh, president of the University of Notre Dame, and Robert F. Storey, dean of the law school at Southern Methodist University, were



Charles T. Thrift Jr.



John A. Hannah



Rev. T. M. Hesburgh

named to a six-man Civil Rights Commission by President Eisenhower. The commission has been authorized by Congress to make a two-year study of civil rights. Dr. Hannah is vice chairman of the commission.

William Dansker, formerly purchasing agent at Brandeis University, Wal-

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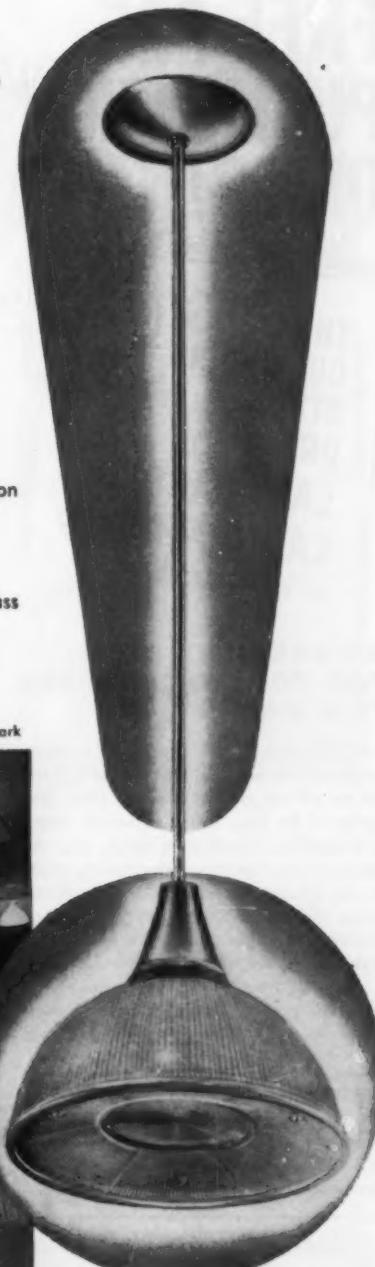
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THE
CONTINUING
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LABORATORIES
BY DR. PAUL E. KING

AN ABSOLUTE MUST FOR MODERN LANGUAGE TEACHING

The 1958 edition of *The Continuing Study on Language Laboratories*, by Dr. Paul E. King, will be off the press in January 1958. One section of the book is a documented review of systems and installations which, over the past ten years, have revolutionized the teaching of modern languages. Another section covers theories and practices in language laboratory teaching, while still a third section deals extensively with the particular needs of electronic teaching methods on secondary and primary school levels. Photographs, illustrations and blueprints complete the book.

Magnetic Recording Industries, first and foremost designers and installers of language laboratory equipment, offers this \$2.00 book as an educational service free to educators who will mail the coupon below before December 31, 1957.

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- Send me free and without obligation a copy of your new 1958 Study on Language Laboratories.
- Our school presently has a language laboratory and we would welcome suggestions regarding improvement of same.
- We do not yet have a language laboratory but hope to establish one in the near future. Send suggestions to us without cost or obligation.

Name.....
Position.....
School.....
Address.....

tham, Mass., was recently appointed to the student personnel department of the university with responsibilities for student placement. He has been succeeded in the post of purchasing agent by Julius M. Chambers.

Lloyd M. Bertholf, academic vice president of the College of the Pacific, Stockton, Calif., was elected 14th president of Illinois Wesleyan University, Bloomington, Ill., by recent action of the board of trustees. He succeeds Merrill J. Holmes. Dr. Bertholf will take office next August 1.

R. McAllister Lloyd, president and chairman of the Teachers Insurance and Annuity Association and the College Retirement Equities Fund, has been appointed to a 12 man advisory council to review the long-range financial position of the Social Security system, according to a recent announcement by Marion B. Folsom, Secretary of Health, Education and Welfare.

Frank R. Kille, dean of Carleton College, Northfield, Minn., for the last 12 years, has been named associate commissioner for higher and professional education of the New York State Education Department. Dr. Kille takes on his new duties February 1.

Russell L. Reed, bursar of Teachers College, Columbia University, recently was appointed assistant controller of Teachers College, according to an announcement by President Hollis L. Caswell. Mr. Reed joined the Teachers College administrative staff in 1951 as chief accountant.

Dr. Morris Meister, principal of Bronx High School of Science in New York City, has been elected by the Board of Higher Education to the post of first president of the Bronx Community College. This is the second community college to be opened by the New York Board of Higher Education.

Carl W. Borgmann, president of the University of Vermont, Burlington, has



Lloyd M. Bertholf



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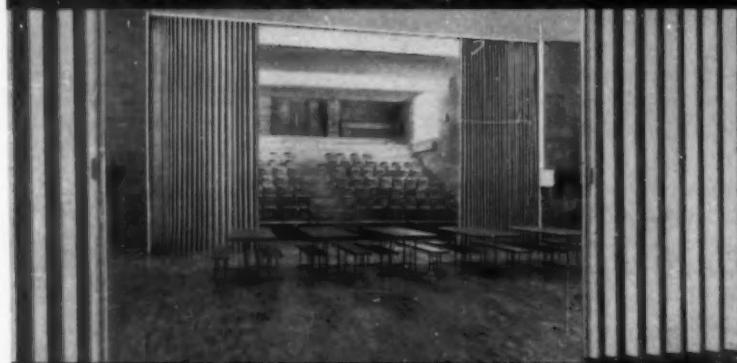
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been named to head the program of the Ford Foundation in science and engineering. He will remain at the university until his successor is named, but not later than July 1.

James R. Killian, president of Massachusetts Institute of Technology, was named by President Eisenhower as a White House "special assistant for science and technology."



James R. Killian

The appointment was made in response to national concern over the progress being made in the missiles program of the Department of Defense.

Ward Stewart, for the past year representative of the U.S. Commissioner of Education on the President's Committee on Education Beyond the High School, has been appointed to a new senior staff position concerned with college and university programs in business and public administration. Dr. Stewart has been a staff member of the U.S. Office of Education since 1952, when he became assistant commissioner for program development and coordination.



F. Edward Lund

F. Edward Lund, formerly president of Alabama College, Montevallo, took office on October 1 as the seventeenth president of Kenyon College,

Gambier, Ohio. He had served as president of Alabama College since 1952.

David M. Delo, president of Wagner Lutheran College, Staten Island, N.Y., since 1952, recently announced his resignation because of a difference of opinion with the board of trustees on administrative procedure. The resignation becomes effective June 30. Wagner College, a liberal arts Lutheran related institution, has an enrollment of 1700 students.

Herbert A. Deckert, business manager and controller of Lake Forest College, Lake Forest, Ill., was elected president of the Chicago area and Wisconsin group of the National Association of Educational Buyers at the association's annual meeting held recently at Lake Geneva, Wis. Mr. Deckert served as vice president of the group last year and succeeds **Harold G. Faulkner**, business manager of Wheaton College, in the presidency.



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College and University Personnel Association

President: Diedrich K. Willers, Cornell University; secretary-treasurer: Shelton F. King, Carnegie Institute of Technology;

executive secretary: Donald E. Dickason, University of Illinois, Permanent headquarters, 809 S. Wright St., Champaign, Ill.; Kathryn Hansen, editor, C.U.P.A. Journal.
Convention: 1958, Purdue University.

National Association of Physical Plant Administrators of Universities and Colleges

President: W. P. Wetzel, Temple University; secretary-treasurer: A. F. Gallistel, University of Wisconsin.
Convention: April 28, 29, University of New Mexico, Albuquerque.

National Association of Educational Buyers

President: J. S. Reaves, University of Florida; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.
Convention: May 7-9, Leamington Hotel, Minneapolis.

Association of College and University Housing Officers

President: William C. Wells, University of Maine; secretary-treasurer: Leonard A. Schaadt, University of Michigan.

National Federation of College and University Business Officers Associations

President: C. O. Emmerich, Emory University; vice president: Kurt Hertzfeld, University of Rochester; secretary-treasurer: G. W. Green, California Inst. of Technology.

Associations of College and University Business Officers

American Association

President: William M. Jones, North Carolina College; secretary: S. V. Jeter, Clark College, Atlanta, Ga.
Convention: April 24-26, Willard Hotel, Washington, D.C.

Central Association

President: Parker Hall, University of Chicago; secretary-treasurer: Ralph Olmsted, Evansville College, Evansville, Ind.
Convention: May 4-6, Edgewater Beach Hotel, Chicago.

Eastern Association

President: John Schlegel, Lafayette College; secretary-treasurer: Kurt M. Hertzfeld, University of Rochester.

Southern Association

President: Claude M. Reaves, Huntingdon College; secretary: C. O. Emmerich, Emory University.

Convention: March 30-April 1, Statler Hotel, Dallas, Tex.

Western Association

President: Kenneth A. Dick, University of Idaho; secretary: Robert B. Gilmore, California Institute of Technology.

Convention: April 20-23, Highlands Inn, Carmel, Calif.

Canadian Association of University Business Officers

President: G. A. Grimson, controller, McGill University; secretary-treasurer: F. J. Turner, Carleton College.
Convention: June 5-7, McMaster University, Hamilton, Ont.

Association of College Unions

President: George Donovan, Pennsylvania State University; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.
Convention: April 20-23, Kellogg Center, Michigan State University, East Lansing.

American College Public Relations Association

President: James R. Jordan, State University of Iowa; executive secretary: W. Noel Johnston, 1785 Massachusetts Ave., Washington, D.C.

NOW...the Shower Head that's

MOST SATISFYING to every student . . .

• Students look forward to shower bathing that will banish fatigue from work or play and restore the feeling of fitness. But just *any* shower head won't satisfy. To win enthusiastic approval, provide the *Act-O-Matic* cone-within-cone spray that delivers an evenly distributed and never distorted shower, directed as desired, and with fingertip volume control.

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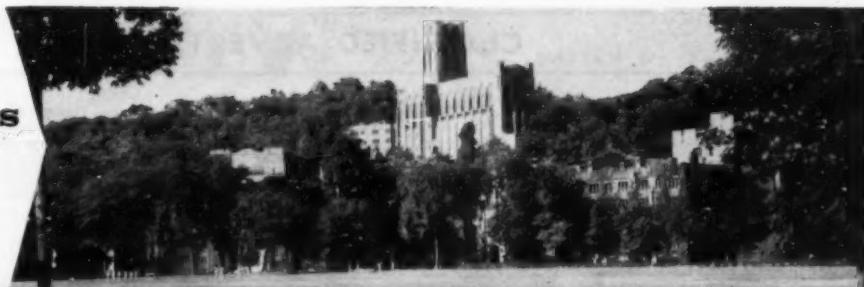
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MILITARY
ACADEMY**



**UNITED STATES
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**UNITED STATES
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Photographs courtesy United States Military Academy, United States Naval Academy, and United States Air Force Academy.

Ric-wil underground piping systems serve ALL three...West Point, Annapolis and NOW...the new Air Force Academy

West Point and Annapolis have been serviced by Ric-wil piping systems as far back as 1931. Since 1946 alone over 15,000 feet of Ric-wil prefabricated piping has been purchased for the nation's top military colleges. Installation of Ric-wil piping at the new 17,500 acre United States Air Force Academy has already been installed. Ric-wil is indeed proud of the part they have played in serving these military academies for a period of over twenty-five years.

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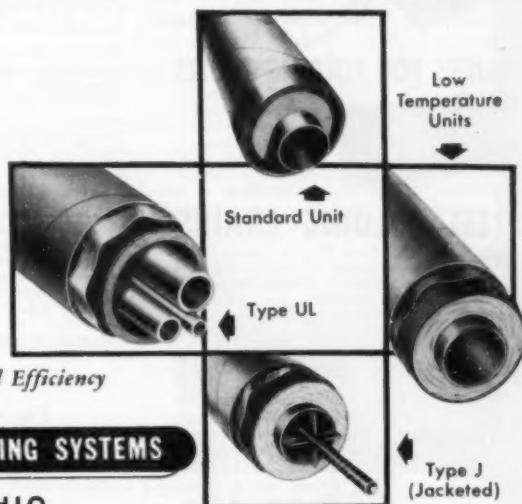
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PREFABRICATED INSULATED PIPING SYSTEMS

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POSITIONS WANTED

Bookstore Manager-Purchasing Agent—45 years old, college graduate, several years experience; also experience with university printing and public relations department. Write Box CW 311, COLLEGE AND UNIVERSITY BUSINESS.

Business Administration—22 years as business officer and registrar, all phases, in state and independent institutions; familiar with machine accounting including some experience with punched cards and in Methods Planning for large firm; master's degree in Business Administration. Write Box CW 371, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager—Small co-educational college; experience all phases business office administration, having worked up through the ranks; experienced in building dormitories, handling personnel; presently college assistant comptroller; B.S. Hotel Administration from Cornell University. Write Box CW 378, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager—Man seeking greater opportunities in position with small or medium sized college or university; presently business manager of small school; ten years' experience in college business management; master's degree in Accounting: C.P.A.; special training in college business management; age 34; family. Write Box CW 372, COLLEGE AND UNIVERSITY BUSINESS.



TRUCKS FOR FOLDING TABLES



Monroe TS (transport - storage) Trucks make handling and storing of Folding Tables easy and quick. Combination offers.

STEEL FOLDING CHAIRS

Monroe Steel Folding Chairs in attractive range of styles, sizes and prices. Excel in comfort, easy handling and durability. Also full line of non-folding chairs, desks and combinations for classroom, cafeteria and church school use.

PORTABLE PARTITIONS

Monroe's new movable partitions change idle space into useful areas. Smooth Masonite panels, tubular steel frames. Swivel pedestals, casters or glides.

THE Monroe COMPANY
77 Church St. • Colfax, Iowa

Business Manager, Treasurer—Executive; age 48; desires to return to the educational field on a permanent basis at university or college level as business manager and/or treasurer; background of twenty-one years of accounting, finance and administration at top-management level, including six years as college business manager; salary open; will relocate anywhere, but would prefer either New England or Southeast United States. Write Box CW 376, COLLEGE AND UNIVERSITY BUSINESS.

Treasurer, Controller, Business Manager—Background of successful commercial business management as treasurer and controller of medium-sized company; desires similar position in college where knowledge of finance, systems and accounting can assist administration; prefer New England area. Write Box CW 375, COLLEGE AND UNIVERSITY BUSINESS.

POSITIONS OPEN

Business Manager, Treasurer, Administrative Assistant—College, university, education board, foundation, etc.; eight years' experience all phases business office administration, including auxiliaries, maintenance; enjoys state board level systematizing, consultant, research, auditing type work; manuals; presently college business manager, 1400 enrollment; University Accounting Degree. Write Box CW 368, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager, Treasurer, Controller—Man; age 37; college graduate; trained and experienced in all phases of college financial and business management; presently associated with large metropolitan area university in a responsible position; desires position as business manager, treasurer, or controller beginning September, 1958, with a college or university located in a smaller city or semi-rural area. Write Box CW 374, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager, Treasurer, Comptroller—Thirty-two years diversified accounting experience, including four and one half years as auditor of university and business manager of junior college. Write Box CW 379, COLLEGE AND UNIVERSITY BUSINESS.

Business Officer—Extensive experience in industrial accounting with supervisory responsibility; now business manager top ranking girls prep school; desire position as college business manager or controller; age 44; married; liberal arts college graduate. Write Box CW 373, COLLEGE AND UNIVERSITY BUSINESS.

Chief Business and Financial Officer—Available; former controller of large corporation; B.A. Degree; seeks position with an educational organization; long experience in finance, accounting, budgets and expense control; if you need a financial-accounting officer and would like to consider me would you please write for a résumé. Address J. S. L., Post Office Box 144, Marion, Massachusetts.

Comptroller, Business Manager, Treasurer—52 years old; B.A.; experienced in accounting, budgeting, financial reports, administrative personnel, etc.; complete résumé on request. Write Box CW 377, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Director—Successful administrator; B.S. Hotel and Institution Administration; M.S. Hotel and Restaurant Administration; experience in college union, dormitory, cafeteria, grill, catering and contract feeding; extensive knowledge of purchasing, stores, menu planning, service, accounting, budgeting, cost controls, labor and personnel development. Write Box CW 370, COLLEGE AND UNIVERSITY BUSINESS.

Assistant to the Director-Building Services Division—College graduate Degree in Engineering, Business Administration preferred; to fill key position at Wayne State University; experience desirable in building maintenance, engineering, management of custodial functions and related activities; 30 to 50 years of age; excellent fringe benefits include liberal vacation, hospitalization, insurance and sick leave; salary open; forward personal data sheet to: Personnel Officer, WAYNE STATE UNIVERSITY, Detroit 2, Michigan.

College Food Service Directors Needed—Rapidly growing college food service contract feeding company is seeking high caliber young graduates; age 24-39; to assume management of college or university food service operations; character and personality more important than experience, but must have a feeling for quality; highest income in the field; opportunities unlimited; relocate your preference considered. Write Box CO 245, COLLEGE AND UNIVERSITY BUSINESS.

Custodial Supervisor—Evening; (\$5-6,000.00); large eastern teachers college; position is salaried; excellent opportunity for developing administrator interested in combining work with further study on Masters or Doctors degree in educational business or plant management; prerequisites are supervisory experience, ability to work with people, professional interest in directing plant operation. Send résumé to Box CO 248, COLLEGE AND UNIVERSITY BUSINESS.

Director of Food Service—College graduate; experience in food management desirable; this position is with well known middle west college; state salary expected. Write Box CO 241, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Director—For residence college of 300; arid, healthful climate. Correspond directly with Personnel Manager, NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY, Campus Station, Socorro, New Mexico.

Supervisor—New England college has opening for custodial supervisor for staff of thirty; initiative, tact and administrative ability more important than experience; person up to age 45 would receive maximum benefits from an exceptionally fine opportunity. Write Box CO 249, COLLEGE AND UNIVERSITY BUSINESS.

Up a blind Alley?? No "dead-end" with this organization for the ambitious, capable young college grad food service man; expansion is a planned one-third of volume per year; enlightened personnel program; pleasant surroundings; pride of achievement. Write Box CO 247, COLLEGE AND UNIVERSITY BUSINESS.

The rates for classified advertisements are: 20 cents a word; minimum charge, \$4. (No charge for "key" number.)

Forms close 25th of month preceding date of issue.

COLLEGE AND UNIVERSITY BUSINESS
919 N. Michigan Avenue, Chicago 11, Ill.

COLLEGE and UNIVERSITY BUSINESS

WHAT'S NEW

December 1957

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 64. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Medart Moto-Vator for Telescopic Gym Seats

One person can open or close the largest gymnasium seating section in a matter of seconds, without physical effort, with the



new mobile electric power operator introduced by Fred Medart Products. Named the Medart Moto-Vator, the unit operates safely and quietly with straight-line accuracy. The lock-lift arm at the front of the Moto-Vator is guided into an opening at the front of the bottom seat row, without raising the front seat riser. When the switch on the handle is pressed, the entire seat section can be rolled open or closed by merely guiding the Moto-Vator back and forth. It is easy to steer and self-operating.

The Medart Moto-Vator operates from any convenient 110-volt outlet. It is compact and efficient, equipped with a 100-foot cord and plug. The rugged construction ensures long use and low-pressure pneumatic tires prevent damage or scuffing of the floor finish. A slight and inexpensive change in the front row understructure will convert all Medart Telescopic Gym Seats installed since 1954 for use with the Moto-Vator. **Fred Medart Products, Inc., 3535 DeKalb St., St. Louis 18, Mo.**

For more details circle #155 on mailing card.

Restyled Copy Machine Is Lightweight and Compact

The Thermo-Fax "Secretary" copying machine has been redesigned for lighter



weight and more compact size. The restyled cabinet design has push-button controls to produce copies in an all-

electric, completely dry, one-step process. Exact copies can be made of correspondence, records, sketches, diagrams, newspaper clippings, forms and other administrative papers in a matter of seconds. The new step-front cabinet provides a working area and permits easier entry of paper into the machine. The unit fits conveniently on office desks or filing cabinets and is available in a pastel green cabinet. **Minnesota Mining & Mfg. Co., 900 Bush St., St. Paul 6, Minn.**

For more details circle #156 on mailing card.

Individual Room Control With Electric Unit Ventilator

Individual room control and low original installation costs are advantages claimed for the new Chromalox Electric Unit Ventilator developed for heating, ventilating and natural cooling of classrooms and similar areas. The unit responds quickly to the changing require-



ments of classrooms and is also effective for heating, ventilating and natural cooling of gymnasiums and auditoriums. Each room unit is self-contained, reducing installation costs, and electric heating is said to have high utilization efficiency, is clean and requires minimum maintenance.

A Draft Barrier is available for installation on both sides of the Chromalox Unit Ventilator for positive control of draft. Cabinet size, heating capacities, baseboard heaters, utility cabinets and other sections are designed to take care of the needs for every area. **Edwin L. Wiegand Co., 7500 Thomas Blvd., Pittsburgh 8, Pa.**

For more details circle #157 on mailing card.

Electric Food Warmer Available in Five Models

Years of engineering research devoted to the operating characteristics of all kinds of food warmers resulted in the development of the new Vapormatic. The new electric food warmer is available in five models, ranging from two feet six inches

(Continued on page 58)

to six feet in length. It is an automatic moist heat food warmer which is extremely economical to operate. It is constructed to prevent overheating, drying out



and steam, and operates on water vapor below the boiling point. The exclusive Dial-a-Food controls are adjusted for the particular food in each compartment and a constant supply of moist heat is automatically provided at just the right temperature without manual filling. **The Bastian-Blessing Co., 4203 W. Peterson Ave., Chicago 30.**

For more details circle #158 on mailing card.

Two-by-Two Slide Projector Has Low Silhouette

A 300-watt CYC "short" lamp recently introduced by General Electric is incorporated into the new Model 706 two-by-two slide projector to give it a low silhouette. The new lamp occupies considerably less vertical space than conventional projector lamps, permitting an extremely compact design with the new projector only six inches high. The new 706 projects Superslides as well as the regular two-by-two and Bantam slides, resulting in a larger screen image at a given distance for the former and excellent optical coverage and brilliant illumination for the conventional slides.

Any of three slide changers can be interchanged in the new projector without tools. Blower cooling ensures ample ventilation of the interior and slide aperture and the electric changer permits remote control.



The projector is mounted in a two-tone fabric-covered case. **Bell & Howell, 7100 McCormick Rd., Chicago 45.**

For more details circle #159 on mailing card.

What's New . . .

Mop Truck Has Improved Design

A major wheel change and streamlined design are incorporated into the Finnell 56-gallon mop truck. The new wheel has



a semi-pneumatic, eight-inch diameter tire and the $\frac{5}{8}$ inch axle bore is equipped with sealed ball bearings. Load rating has been increased. The streamlined design of the truck conserves storage space and the wheels, two of which swivel, are recessed. The truck is ruggedly constructed of galvanized or stainless steel. **Finnell System, Inc., 4400 East St., Elkhart, Ind.**

For more details circle #160 on mailing card.

Non-bearing Partition Minimizes Sound Transmission

The new Penn Metal partition system is designed to minimize sound transmission from room to room. Known as the Hush Clip System, the partition achieves a sound transmission rating loss of 56.4 decibels. The system is based on the new Hush Clip

used in conjunction with a $\frac{1}{2}$ -inch pencil rod, and steel studs, track and gypsum plaster over metal lath. Sound transmission is reduced because direct wall-to-wall contact is made only at point of clip. The Hush Clip system does not require cork strips and is only $\frac{3}{8}$ inches thick. **Penn Metal Co., 40 Central St., Boston 9, Mass.**

For more details circle #161 on mailing card.

Modern Settee for Dormitory or Lounge

Genuine Walnut is used in the new Sikes Settee No. 1954 1/6T. Available in leather or fabric, with seats and backs of rubberized hair and cotton for comfort and long wear, the new settee is made with three seats or with the center seat replaced by a table as in the illustration. When the table is used, the top is finished in matching Formica. The Wallsaver legs



have brass ferrules. A matching chair is also new in the line of furniture for dormitories, lounges, reception halls and similar areas in the college. **The Sikes Co., Inc., 20 Churchill St., Buffalo 7, N.Y.**

For more details circle #162 on mailing card.

EASE PARENT BURDEN OF RISING EDUCATION COSTS

As costs of tuition, room and board rise unavoidably, more than 500 colleges and schools have helped parents meet this problem by adopting The Tuition Plan. The Plan operates at no expense to the college. It offers parents a welcome alternative to lump-sum payments—a convenient monthly payment Tuition Plan contract.

In addition to a fully-paid enrollment at the start of every term and enhanced parent good will, colleges have enjoyed

these new benefits of The Tuition Plan:

COLLEGE HAS NO FINANCIAL LIABILITY . . . on parent-signed contracts, colleges need not refund in event parent defaults on contract.

A FOUR, THREE OR TWO YEAR PLAN . . . now may be offered under one flexible contract.

LIFE INSURANCE INCLUDED . . . in event parent dies, life insurance takes care of total remaining costs covered by 4, 3 and 2 year contracts.



Write today for descriptive brochure.

THE TUITION PLAN, INC.

347 FIFTH AVENUE, NEW YORK 16, N.Y.

Commercial Incinerators Available in Four Sizes

Designed to meet or exceed the requirements of municipal codes, the new Series "S" Incinerators for commercial



use are offered in four sizes: 7, 10, 15 and 20 bushel capacities. They feature top feed with low loading height, a special Dehydrating Hearth to dry out refuse efficiently, three Secondary Expansion Chambers with extra long firetravel and down-draft design to eliminate smoke and odor, and economical price. The Model "S" can be installed indoors or out and can burn dry refuse without fuel. **Winnen Incinerator Co., 932 Broadway, Bedford 32, Ohio.**

For more details circle #163 on mailing card.

Mobile Food File Rack for Vimco Refrigerators

The Vimco Series "V" Refrigerators are equipped with a full length mobile food file rack for bulk unit loading, unloading and handling of foods. The loaded mobile rack can be placed in or taken out of the refrigerators with ease by a specially designed cart. The result of two years of research and experimentation, the new unit will hold as many as 126 twelve by twenty by two-



inch deep pans and will also take other pans of full or fractional sizes.

Vimco Series "V" refrigerator doors are full length to house the new unit. The mobile unit will incorporate the Vimco, Sta-Kold and Sno-Queen patented interchangeable features, accommodating shelves, trays and pan slides. **Victory Metal Mfg. Corp., Plymouth Meeting, Pa.**

For more details circle #164 on mailing card.
(Continued on page 60)

People want

FORT HOWARD TISSUE **...with the gentleness of home tissue**

Your employees, customers or visitors appreciate the quality of Fort Howard Tissues—like bleached interfolded tissues that fit your cabinet. They have the same superior strength and gentle absorbency as the tissues they use at home.

You'll get a lot of good-will from such reasonably priced quality tissue...plus economy from carefully

interfolded sheets that dispense from a locked box.

Re-consider your tissue needs today! Your requirements can be met better by one of Fort Howard's 19 grades and folds. For more information and samples—call your Fort Howard distributor salesman or write Fort Howard Paper Company, Green Bay, Wisconsin.



Fort Howard Paper Company

Green Bay, Wisconsin

America's most complete line of paper towels, tissues and napkins

©Fort Howard Paper Company

Another fine product from
FORT HOWARD
PAPER COMPANY
GREEN BAY, WIS.
BLEACHTEX

NO. 168

MAID OF THE FOREST

DOUBLE FOLD
CABINET TISSUE

300 SHEETS

4½ IN. WIDTH

*"Little things affect people's
attitude toward you"*

What's New . . .

Low-Cost Incinerator
Burns Trash Outdoors



The Alsto Model C10 is a redesigned outdoor incinerator with a capacity for burning 10 bushels of trash. No installation cost or auxiliary fuel are required and it burns damp, green or dry refuse in any weather. Smoke and smell are minimized, due to the scientific draft control which also prevents blowing of bits of burning paper.

The new unit requires no watching and is safe for use ten feet from buildings. It is made of aluminized steel and has replaceable double panel construction, hinged loading hood and wide ash clean-out door. It stands 52 inches high with a 35-inch square base and detachable ash pan base and grate. Alsto Co., 4007 Detroit Ave., Cleveland 13, Ohio.

For more details circle #165 on mailing card.

Ketchup and Mustard in Individual Packets

Packet Brand Unit-Packets of ketchup, mustard and grated Parmesan cheese offer economy and sanitation in the serving of these condiments. Use of the air-tight moisture-proof packets with easy-pour spouts permits accurate portion control and saves time and labor. The sanitary packets eliminate the need



for serving bottles or other containers which are difficult to keep clean. Waste and spoilage are also eliminated when one-service packs are used.

Packets may be placed at the end of the cafeteria line or on tables or trays. They can also be used where hot food is offered in off-hours through vending machines. Unit-Packet Corp., Dept. S, Wilmington, Mass.

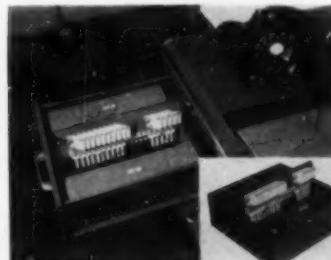
For more details circle #166 on mailing card.

(Continued on page 61)

Key Control with Ke-Drawer

The Ke-Drawer is a new unit for indexing and identification of keys which are filed neatly and compactly. Keys are securely attached to sturdy plastic tags for rapid, easy filing and the responsible individual knows at all times what keys are checked out and where they are.

The Ke-Drawer will fit neatly into a standard office desk drawer and is especially designed so that its cover must be closed before the desk drawer can be shut, thus giving extra protection to keys. The Ke-Drawer is constructed of welded steel with a durable finish in a variety of colors. It has a capacity of



80 keys, divided into four racks. A handle makes it easy to carry. Cushman & Denison Mfg. Co., 153 W. 23rd St., New York 11.

For more details circle #167 on mailing card.

NEOPRENE GLOVES

• For Biological, Medical,
Radioisotope and
Pharmaceutical Research
in Safety Enclosures.
Arm length only. Bellows
or Bucket type with
8" opening. Write:
S. Blickman, Inc., 2812
Gregory Avenue,
Weehawken, New Jersey.

BLICKMAN
SAFETY ENCLOSURES

Look for this symbol of quality **Blickman-Built**

THIS MONTH'S



*Super
Value*

*The Most
Comfortable
COMPACT
Chair You
Can Buy!*

#1093 EASY CHAIR

Perfect for semi-private rooms, as well as other uses in hospital and dormitory. Compact—requires only 24" x 26" floor space. Comfortable—no-sag construction; upholstered back and seat. Wall-saver design—has flared back legs which keep chair's back away from wall. Finished and upholstered to specifications.

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Contract Furniture

3501 BUTLER ST., PITTSBURGH 1, PA.
ESTABLISHED 1873

E-19

What's New . . .

High-Gloss Floor Wax Contains Polyethylene Plastic

Everbrite Wax for efficient floor care has been improved by the addition of polyethylene plastic NT-93 derivative. Advantages of the new formula include longer wear, water resistance and non-slip walking surface. The durable wax dries to a high gloss and can be damp mopped and buffed to renew its attractive appearance. The anti-slip quality assures safety and the new wax features increased durability. National Disinfectant Co., 2417 Commerce St., Dallas 26, Texas.

For more details circle #168 on mailing card.

Butter-Pak Machine Produces Sanitary Pats



Sanitary service of individual butter pats is now possible. The new Butter-Pak machine takes bulk butter, forms it into patties and individually wraps each patty in a heat-sealed cellophane envelope. The

individual packs are then boxed in two and one-half pound serving trays. Food service patrons, students and instructors alike, can be assured of receiving a sanitary pat of butter when the individual packs are used. Butter-Pak, Inc., 3245 Larimer St., Denver 5, Colo.

For more details circle #169 on mailing card.

other place of use. W. H. Frick, Inc., 705 Citizens Bldg., Cleveland 14, Ohio.
For more details circle #170 on mailing card.



20-Quart Mixer in Table Model

Designed especially to handle a variety of kitchen tasks, including mixing, beating or whipping of various types of foods, the new Toledo 20-Quart Mixer has an auxiliary power socket for accessories. It can thus be adapted for use in meat and food chopping, slicing, juice extraction and sharpening. The swivel mounted bowl saddle swings to the right for use with accessories mounted in the auxiliary power socket. The mixer is finished in two shades of gray with heavily tinned bowl for complete sanitation. Toledo Scale Co., 1023 Telegraph Rd., Toledo 13, Ohio.

For more details circle #171 on mailing card.

(Continued on page 62)

Institutions — Schools — Hospitals —
Industrial Plants — Hotels — Caterers —
Camps — Air Lines — Government — Civil
Defense — Commercial Feeding Operations.

THE "AERVOID" CENTRAL KITCHEN SYSTEM HAS PROVED ITS WORTH IN ALL FIELDS OF MASS-FEEDING



VACUUM CAN COMPANY
19 South Hoyne Avenue, Chicago 12, Illinois

AERVOID Vacuum Insulated
Hot or Cold Food, Soup, Milk,
Coffee and Beverage Carrier-Dispensers

AerVoid's provide . . .
Sanitary Vacuum Insulation . . .
A positive Health Safeguard!

To-day's "Modern" trend toward centralization of food preparation is a milestone toward Economy, Better Quality and Higher Sanitary Standards. Into this new picture nothing fits like AerVoid's Portable, Stainless-Steel, High-Vacuum Insulated, food, soup and liquid Carrier-Dispensers. AerVoid's alone provide the proven quality and durability to survive under rough usage, spreading their cost over a long period of uninterrupted service. All AerVoid Equipment, as indicated in our specifications is "In Compliance" with the sanitary construction requirements of the U. S. Public Health Service Ordinances and Codes.

Write for FREE Literature Kit CUB-01
Our Consulting Service is also FREE

durable
AND
Smart
FURNITURE



Arm Chair

No. 420

Also available, a wide assortment of chairs and tables for dormitory, social room, dining room and other uses.

See your dealer or write us for our distributor's name.

AMERICAN
CHAIR COMPANY
MANUFACTURERS
SHEBOYGAN, WISCONSIN

PERMANENT DISPLAYS: Chicago — Space 1650, Merchandise Mart
New York — Decorative Arts Center, 305 East 63rd St. (9th Floor)
Miami — 3900 Biscayne Boulevard • Boston — 92 Newbury Street
San Francisco — 558 Western Merchandise Mart, 1355 Market St.

What's New . . .

Four-Speed Food Mixer
Available in Two Sizes



The new Reco Food Mixer features four separate positive and distinct speeds in operation. The planetary arm action and beater both revolve in the same direction, ensuring complete, uniform mixing. The mixer is available in either 12 or 22-quart capacity and the modern streamlined design makes cleaning easy. **Reynolds Electric Co., 3000 River Rd., River Grove, Ill.**

For more details circle #172 on mailing card.

"Wall-Hung" System for Shelves and Chalkboards

Chalkboards, coat racks, steel shelving and other classroom, office or library equipment can be installed with the new flexible Ames "Wall-Hung" supporting system. Full flexibility for installing,

arranging and removing the equipment is offered with the vertical, slotted steel columns that are easily installed at 36-inch intervals along walls. Any standard bracket-equipped fixture can be quickly set in position, readjusted or interchanged to fit the needs of the classroom or other area. The wall-mounted fixtures reduce equipment costs and give complete portability and freedom while adapting existing equipment to new needs. The variety of bracketed acces-



sories offered makes the system economical for any use. **W. R. Ames Co., 150 Hooper St., San Francisco 7, Calif.**

For more details circle #173 on mailing card.

Plexiglas Material for Permanent Installation

Permanent installations of Plexiglas Lenscreen Material can be made in the classroom or conference room to make daylight viewing areas always available. In addition to its use as a screen for projection without room darkening, the new Lenscreen can double as a blackboard.

Lenscreen appears black when the area

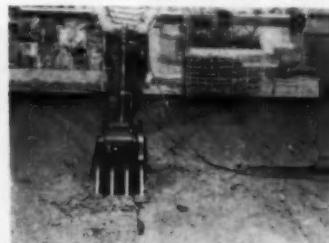
(Continued on page 63)

immediately behind the screen is in shadow, hence images nearly equal in size to those normally produced in a darkened room may be obtained in daylight. **Polarcoat Incorporated, 9750 Conklin Rd., Blue Ash, Ohio.**

For more details circle #174 on mailing card.

Automatic Tile Remover Strips Off Flooring

A new portable electric tile remover automatically strips off old composition flooring. The Tile Remover not only removes tiles five times faster than hand methods, but reduces the time floors are out of service. It has four 3½-inch wide steel cutter blades whose angles



can be adjusted for the type of tile, thickness, bonding agent or other factors. The machine cleans a 14-inch path on every cut and has a built-in grinding attachment. **American Floor Machine Co., Toledo 3, Ohio.**

For more details circle #175 on mailing card.

NOW! Fingertip Portion Control

Speeds up SELF-SERVICE MILK DISPENSING!

Completely Dependable
Performance Proven in Daily Use
at Leading University Cafeterias!

Fast service is vital to efficient mass feeding—so let Meterflo push-button self-service keep your lines moving! Several units have been in constant service for over three years at Brody Hall, Michigan State University. Each unit serves approximately 672,000 refrigerated glasses of fresh milk annually... an efficient, cost-cutting operation! Only one location in a campus-wide installation of 40 plus Meterflo units dispensing a total of over 2,000 gallons per day.

Meterflo® DISPENSERS
Dept. CU, Niles, Michigan



- Fully automatic, refrigerated!
- 1 to 32 oz. portion control
- Utmost in sanitation
- Simplified handling cuts labor costs!
- Pushbutton or coin-operated!

Write today!
Learn how to improve
your university, hospital or industrial milk
serving problem automatically

Photo of installation in Brody Hall, M.S.U.



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What's New . . .

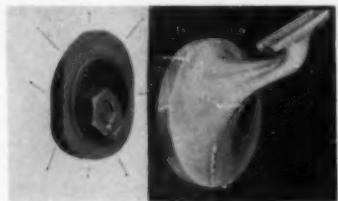
Diesel Powered Generators Available in Sizes

A complete line of diesel powered generating sets is now available from Universal Motor Company. The units are offered in sizes ranging from 10 to 35 KW, in either single phase or three phase, for two, three and four-wire applications in all popular voltages. All models include as standard equipment mounted engine instruments, mounted generator instruments, automatic voltage regulator, rheostat, fuel tank and electric starting. **Universal Motor Company, Oshkosh, Wis.**

For more details circle #176 on mailing card.

Hand Rail Brackets Are Instantly Aligned

Installation problems resulting from off-center anchor bolts are eliminated by the new adjustable Ariston hand rail brackets which may be instantly aligned



in any direction on the wall surface. The shell-molded bracket fits over the mounting plate and adjustment disc, eliminating exposing anchor bolts and screws. The Ariston rail brackets are

easily installed on plaster, concrete or wood and take any metal or wood handrail. They are finished in natural or alumilited aluminum and satin or polished bronze. **Michel & Pfeffer Iron Works, Inc., 212 Shaw Rd., South San Francisco, Calif.**

For more details circle #177 on mailing card.

No Messy Fingers with Quick-Change Ribbon

The messy job of changing typewriter ribbons is cleaned up with the new Royal "FP" Standard Typewriter by the use of the Twin Pak quick-change ribbon.



Twin plastic cartridges are held in either hand, the ribbon laid in place in the newly-designed ribbon carrier and each plastic cartridge dropped into place. White gloves demonstrate the cleanliness of the operation as fingers touch only the plastic containers, never the inked ribbon. The new typewriter also offers a fast, smoother typing touch, 30 per cent increase in quietness and two-color styling. **Royal Typewriter Co., Div. of Royal McBee Corp., Westchester Ave., Port Chester, N.Y.**

For more details circle #178 on mailing card.

(Continued on page 64)

Glass and Fiber Container for Suction Cleaner

Superite, a new glass and fiber material, is used for the attractively de-



signed container of the Super Model BP-2 Commercial Suction Cleaner which is said to embody a new concept in mechanical floor maintenance equipment. The use of Superite not only reduces weight and permits the flowing contour lines of the container, but protects against damage because of the strength of the material and the fact that the color and finish are an integral part of the Superite. The new material also protects the container from damage resulting from corrosive liquids in wet pick-up or transfer operations. The Super Model BP-2 is equipped for wet and dry pick-up and blowing. **The National Super Service Co., 1945 N. 12th St., Toledo 2, Ohio.**

For more details circle #179 on mailing card.

Why the great growth of MOSINEE TURN-TOWL SERVICE in college washrooms?

1. The towel itself will outperform any other towel for its ability to absorb water quickly, thoroughly.
2. Controlled Turn-Towl cabinet dispensing cuts towel consumption from 40% to 50%.
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4. Low cost of Turn-Towl service benefits citizens who pay college costs.



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Please send me the free Turn-Towl Kit with complete information on Turn-Towl Service.

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What's New . . .

Melmac Dinnerware in Color-on-Color Design

An exclusive color-on-color process which bonds two colors into a single piece is used to produce the new Deluxe Regal Ware Melmac dinnerware. The new pattern incorporates the Texas-Ware self-draining contour base and heavy-duty rolled edge for appearance and strength. The new ware is available in sepia and tan,



white with burgundy, Bermuda coral and sage green, and in solid and textured colors. Plastics Mfg. Co., 825 Trunk Ave., Dallas 10, Texas.

For more details circle #180 on mailing card.

Pillsbury Food Mixes Now in Institutional Size

Convenience in institutional handling is responsible for development of the 50-pound institutional pack now offered by Pillsbury. Replacing 25 and 100-pound sized packages, nineteen items are now available in the new institutional pack, including cake, muffin, bread, waffle and pancake mixes. Pillsbury Mills, Inc., Minneapolis 2, Minn.

For more details circle #181 on mailing card.

High-Reaching Dry-Mop Is Disposable

Ceiling fixtures, ceilings and other overhead areas up to 20 feet can be cleaned without ladder or staging with the new Ready disposable dry-mop. The unique head attachment permits clean-



ing the top or underside of lighting fixtures, overhead pipes and other objects. The mop has a sweep of 22 inches and the disposable mop pads of virgin cotton fibers hold dirt and dust. Replacements are inexpensive and the unit weighs less than three pounds, including two extension handles. Ready, Inc., 532 Main St., Holyoke, Mass.

For more details circle #182 on mailing card.

Literature and Services

- "Pittsburgh Fluorescent Equipment" is the title of a new eight-page bulletin prepared by Pittsburgh Reflector Co., 478 Oliver Bldg., Pittsburgh 22, Pa. Designated Bulletin Z, it gives a comprehensive story on the new complete line of recessed modular light units introduced by the company, with complete specifications, dimensional data, photographs, tables and drawings providing the data on the various lighting units in the line.

For more details circle #183 on mailing card.

- Full information on copper-lined storage water heaters for any commercial installation is given in Data File 16 released by The Patterson-Kelley Co., Inc., East Stroudsburg, Pa. Designed to be used as a file folder, the material includes diagrams of construction details and specifications, data on dimensions and capacities, installation suggestions and case histories of typical installations.

For more details circle #184 on mailing card.

- "Lab-Crest Glassware" is the subject of a new laboratory glass catalog prepared by Fischer & Porter Co., 10 Jacksonville Rd., Hatboro, Pa. Catalog 80C100 describes the line fabricated from Pyrex brand glass, including burettes, aspirator bottles, gas collecting tubes, Karl Fischer apparatus, separatory funnels, nitrometers, manifolds and stopcocks.

For more details circle #185 on mailing card.

- "Graphic Design in Eternal Metals" is the title of a 2-color brochure illustrating and describing the architectural products in bronze, aluminum, nickel-silver, brass and stainless steel made by A. J. Bayer Company, 2300 E. Slauson Ave., Los Angeles 58, Calif. Products include letters, signs, plaques, tablets and other art metal symbols.

For more details circle #186 on mailing card.

- The facts about fluorescent lamp ballasts are included in a new folder, "Is the UL Label on a Ballast Really Enough for You?" The folder outlines the difference between UL listing on a ballast and the CBM emblem and is available from Certified Ballast Mfrs., 2116 Keith Bldg., Cleveland 15, Ohio.

For more details circle #187 on mailing card.

- A new "Engineering Data Sheet Service" presents three solutions to the problem of providing electrical outlets for the many electric typewriters and business machines now in offices and in classrooms. Available from The Wiremold Co., Hartford 10, Conn., Data Sheet A-11 contains suggested layouts for office and classroom areas using 2000 Plugmold.

For more details circle #188 on mailing card.

- "So You're Going to Raise Funds" is the title of a new 55-page guide to the principles and techniques of fund raising published by the National Publicity Council, 257 Fourth Ave., New York 10. It was written for use by all organizations who must raise funds from the public: colleges, schools, hospitals and similar groups. Individual copies are available from the Council at \$1.25 each, plus five cents postage, with special discounts on quantities.

For more details circle #189 on mailing card.

- Samples of the 22 colors in which Sanymetal Toilet Compartments and Shower Stalls are offered are shown in a folder issued by Sanymetal Products Co., Inc., 1696 Urbana Rd., Cleveland 12, Ohio. Entitled "Sanymetal Palette of Colors," the folder provides a handy color guide for business managers, planning groups and architects.

For more details circle #190 on mailing card.

- A new Cafeteria Counter Catalog offered by Duke Mfg. Co., 2305 N. Broadway, St. Louis 6, Mo., gives complete information and specifications on the Models 30 and 24 standard cafeteria counters. A section containing 16 counter diagrams offers an arrangement to fill most individual needs.

For more details circle #191 on mailing card.

- A new bulletin describing the Multi-Clean method for maintaining asphalt tile floors is available from Multi-Clean Products, Inc., St. Paul 16, Minn. Form 1401 gives detailed instructions for initial treatment, daily maintenance and the restoration of all types of asphalt tile floors.

For more details circle #192 on mailing card.

- Illustrated Catalog No. 170, available from Allied Radio Corp., 100 N. Western Ave., Chicago 80, consists of 404 pages and lists 27,000 items. Business managers will be interested in sections on training kits, recording and test equipment, books, diagrams, parts, tubes and equipment required for radio and electronic training.

For more details circle #193 on mailing card.

- Stallpack Standardized Marble Toilet Compartments are described in a new booklet offered by Carthage Marble Corp., Carthage, Mo. Stallpack is a complete packaged unit which includes a polished marble partition, a solid-core birch door and a set of chrome-plated hardware. Typical installations and Stallpack hardware are illustrated in the booklet which also contains complete specifications and detail drawings.

For more details circle #194 on mailing card.

- Air Diffusers for air conditioning, heating and ventilating systems are the subject of the new Selection Manual No. 60 brought out by Anemostat Corp. of America, 10 E. 39th St., New York 16. The 80-page booklet contains numerous diagrams, tables and photographs to aid in the selection of diffusers and accessories.

For more details circle #195 on mailing card.

- The "Corrulux Double Dome Skylight" is the subject of a new brochure offered by Corrulux Div., L-O-F Glass Fibers Co., P.O. Box 20026, Houston 25, Tex. Specifications are provided for the standard three types as well as examples of the uses and benefit of double dome skylights.

For more details circle #196 on mailing card.

Supplier's News

Stephens-Bangs Associates, Inc., 116 Delaware St., Detroit 2, Mich., is the new name of the recently merged food facility engineering companies, J. E. Stephens Associates, Inc., and the O. Ernest Bangs Associates. The new organization provides complete planning, design and engineering for all types of food service.



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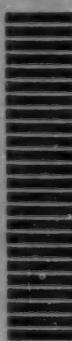
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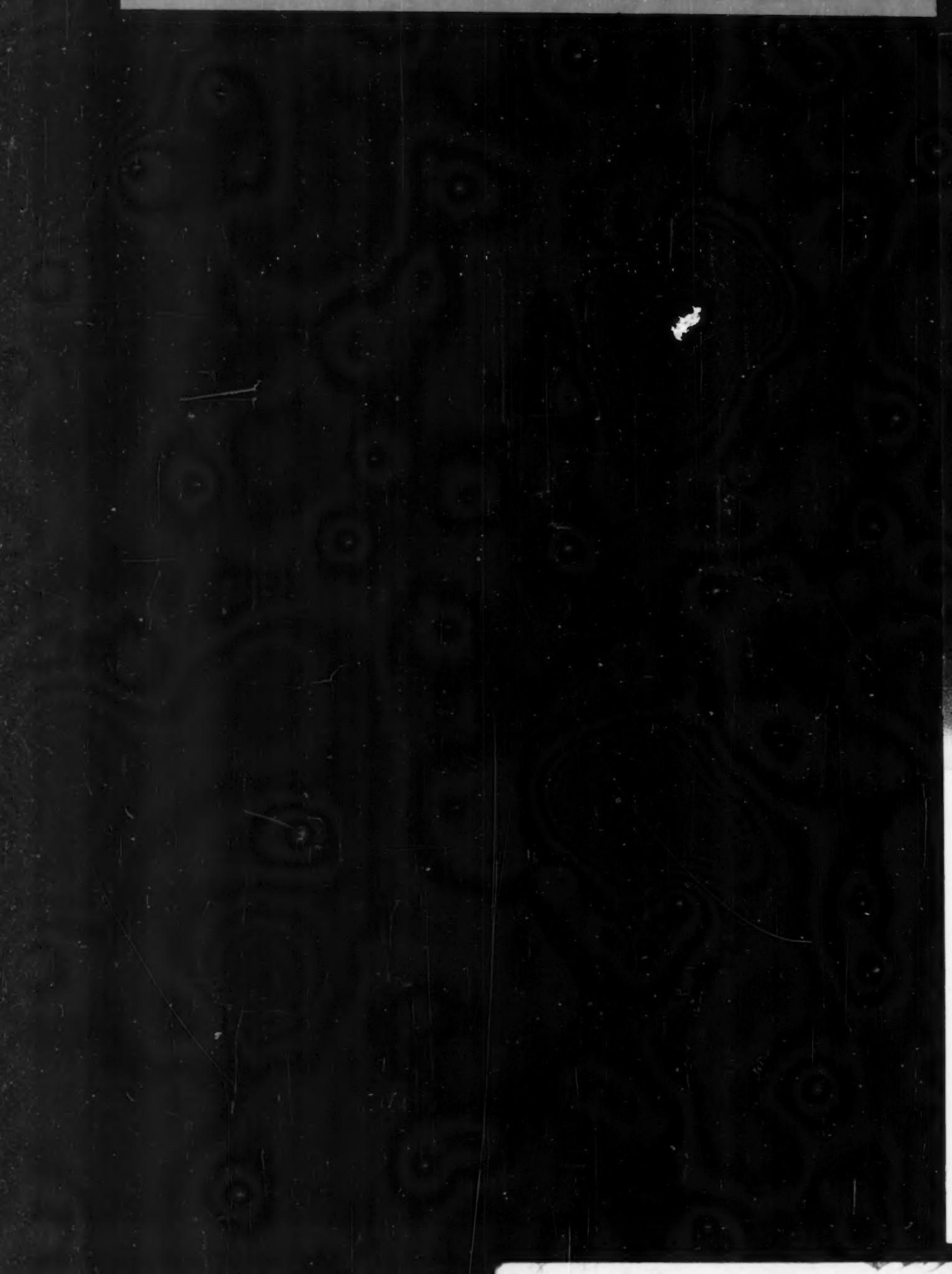
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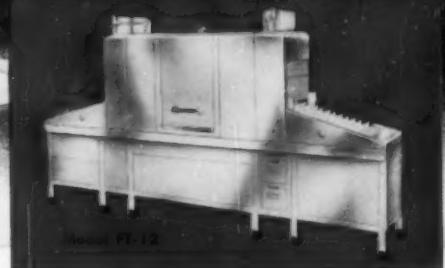
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You'll sparkle as your dishes and sanitary standards sparkle — and sparklingest of all will be your cost-per-serving figures!

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The Model FT-26 (illustrated) power scraps, power washes, power rinses and final rinses with additional time-for-drying. And between these two are many other models. Conveyor speeds can range from 5 to 12 ft. per minute. If you have a smaller operation, there are many other Hobart automatic or semi-automatic models to choose from. Ask the advice of your local Hobart dealer. But if you're medium-sized and busy—or big—be sure to see the *Hobart Flight-Type*—the only dishwasher built with all stainless steel Flight-Type conveyors. A less expensive conveyor with nylon flight links is available. The Hobart Manufacturing Co., Troy, Ohio.

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